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SUPPLEMENT

12TH EUROPEAN PUBLIC HEALTH CONFERENCE

Building bridges for solidarity and public health

Marseille, France, 20th–23rd November 2019

ABSTRACT SUPPLEMENT

Guest editors: Yves Charpak, Denis Zmirou-Navier, and Dineke Zeegers Paget

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This publication arises from the conference ‘‘12th European Public Health Conference’’

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1. INTRODUCTION

We are delighted to introduce this abstract supplement to the European Journal of Public Health which contains the abstracts of papers presented at the 12th European Public Health (EPH) Conference, held 20-23 November 2019 in Marseille, France. This supplement includes abstracts for the main part of the conference, including plenary sessions, oral and pitch presentations, workshops, moderated poster walks and poster displays.

For Marseille 2019, we received 2.025 abstracts including a record number of 150 workshop abstracts. Abstracts were received from 82 countries.

All abstracts were scored by the members of the International Scientific Committee (ISC) of the EPH Conference. The ISC of the Marseille 2019 conference consisted of 92 experts from 27 countries and was chaired by Prof Denis Zmirou-Navier. We are extremely grateful to all ISC members for the hard work this involved. The members of the ISC scoring in 2019 are listed below.

On average, each abstract was scored by 3,6 reviewers, each workshop by 3.5. The average score of the abstracts was 4.39 (last year 4.25). The highest score was 7.00, the lowest 1.33. The average score of workshops was 5.02 (last year 4.95). The highest score was 6.66 and the lowest 2.33.

The highest scoring abstracts are accepted for the EPH Conference. The rejection rate for the abstracts was 16.9% and for workshops, the rejection rate was 40.0%. The EPH Conference Executive Board and representatives from the Local Support Committee met on 11 June 2019 to decide on cut-off points for workshops, oral presentations, pitch presentations and poster presentations, resulting in an excellent selection of workshops and presentations, as showcased in this abstract supplement.

Table 1: cut-off points for the abstracts 2019

Workshops	average score of 5.000 or higher were accepted
Oral presentations (8-minute presentation)	average score of 5.660 or higher were accepted
Pitch presentations (5-minute presentation)	average score of 5.000 or higher were accepted
Moderated poster walks (3-minute presentation)	average score of 4.750 or higher were accepted
Poster displays (throughout the programme)	average score of 3.600 or higher were accepted

Following these decisions, abstracts were grouped in sessions, sessions in tracks and tracks were linked to the content of the plenary programme. The programme for Marseille 2019 is organised in 16 thematic tracks, that mix workshops, oral and pitch sessions.

The 16 thematic tracks are:

A. Solidarity in health
B. Migration and health
C. Digital Health
D. European and global health
E. Public health policy and politics
F. Maternal, child and adolescent health
G. Chronic diseases
H. Health services research, systems and economics
I. Infectious diseases control
K. Mental health / LGBTI and minorities

International Scientific Committee, Marseille 2019, active

— Prof Denis Zmirou-Navier, *France* (chair)
— Ms Mette Aadahl, *Denmark*
— Prof Róza Ádány, *Hungary*
— Prof Tit Albreht, *Slovenia*
— Prof Kristina Alexanderson, *Sweden*
— Prof Arja Aro, *Denmark*
— Dr Marleen Bekker, *Netherlands*
— Prof Johan Bilsen, *Belgium*
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— Dr Peter Schröder-Bäck, *Netherlands*
— Prof Anthony Staines, *Ireland*
— Prof Danijela Stimac Grbic, *Croatia*
— Prof Christiane Stock, *Germany*
— Mrs Pernille Tanggaard, *Denmark*
— Prof Aura Timen, *Netherlands*
— Dr Peter Van Den Hazel, *Netherlands*
— Mr Arjan van der Star, *Sweden*
— Ms Caroline Vass, *UK*
— Dr M Luisa Vázquez Navarrete, *Spain*
— Prof Arnoud Verhoeff, *Netherlands*
— Prof Paolo Villari, *Italy*
— Prof Bilkis Vissandjee, *Canada*
— Mrs Anne Vuillemin, *France*
— Mr Greg Williams, *UK*

L. Health assessments / Elderly care / Cancer
M. Healthy living, food and nutrition
N. Health information and health literacy
O. Global health and environmental change
P. Data, evidence and practice
Q. Health workforce / Health at work

The moderated poster walks have their own sessions. And the poster displays are on display throughout the conference.

As always, we greatly enjoyed reading the submissions, and learned much from them. We hope that you will find this volume equally interesting, and even more so the actual presentations, which promise to be of high quality yet again.

Looking forward to seeing you in Marseille,

Dr Yves Charpak, Chair of the 2019 European Public Health Conference

Prof Zmirou-Navier, Chair of the International Scientific Committee

Dr Dineke Zeegers Paget, Director of the EPH Conference Office

2. PLENARY SESSIONS

PLENARY 1

Building bridges between different professions and communities as a means to implement the Social Development Goals (SDGs)

Organized by: WHO EURO, EUPHA

Moderators: Natasha Azzopardi Muscat, President EUPHA, Anna Cichowska Myrup, Programme Manager Public Health Services, WHO Regional Office for Europe

Following the plenary at the Ljubljana 2018 conference presenting a Roadmap to implement the 2030 Agenda for Sustainable Development, this plenary will focus on building bridges between different professions and communities as a means to implement the Sustainable Development Goals (SDGs). Building on Health 2020, the European policy for health and well-being sets out five interdependent strategic directions:

1. Governance: advancing governance and leadership for health and well-being;
2. equity and social justice: leaving no one behind;
3. partnerships for health: preventing disease and addressing health determinants by promoting multi- and intersectoral policies throughout the life-course;
4. local action: establishing healthy places, settings and resilient communities; and
5. Universal Health Coverage: strengthening health systems for universal health coverage.

In this plenary, we will take the discussion one step further: What were the *key decisions* that were taken by policymakers and which *partnerships* made it happen? What *ways of working* did we adopt and how did we *manage the necessary changes*? The stage on how to develop leadership and innovation capabilities needed to achieve the SDGs will be set by the founder of the Presencing Institute, Dr Otto Scharmer. Three professionals (representing a research institute, an international health organization and a city council) reflect on the year 2018 and how their work, in partnership with other sectors, has shaped the future we are now in.

Keynote speaker:
C. Otto Scharmer
Senior Lecturer, MIT Management Sloan School, Cambridge, USA

Panellists:
Miklós Szócska
Director Health Services Management Training Center, Semmelweis University, Budapest, Hungary

Paula Vassalo
President of the European Dental Public Health Association (EADPH)

Ricardo Baptista Leite
Member of Parliament, Head of Public Health at Católica University of Portugal, and former Deputy Mayor of Cascais, Portugal

PLENARY 2

Building bridges for migration in a planetary context

Organized by: ECDC, EUPHA (IDC)

Moderators: Karl Ekdahl, ECDC, Michael Edelstein, EUPHA (IDC)

Europe is experiencing high volumes of migration, both within and to the region. Globally, several factors contributing to high-volume migration, ranging from economic ones (migrant workers) to forced displacement caused by conflict, persecution and climate changes (draught or other extreme weather conditions) severely affecting living conditions. The International Organisation for Migration (IOM) has estimated that in 2017, the number of international migrants living in Europe reached 78 million, over 10% of the European population, and that two-thirds of international migrants live in Europe or Asia. In EU countries, an estimated 22.3 million migrants are non-EU citizens (data as of 1 January 2018) and in 2017 alone, the EU has seen 2.4 million new arrivals from non-EU citizens to its Member States. Inevitably, this trend has significant implications for public health in Europe.

Migration has significant implications for public health in Europe. Beyond potential pressures on healthcare systems, that can occur especially in instances of large scale rapid migration, some subgroups of migrants, particularly those forcibly displaced or those originating from countries with weak health systems (i.e. refugees, asylum seekers and irregular migrants) are particularly vulnerable and susceptible to infections. This may be due to the fact that they could come from countries with high prevalence of infectious diseases and/or low vaccine coverage. In addition, the migration journeys or substandard living conditions in overcrowded migrant centres may have increased the risk of contracting an infection. This plenary session will showcase several bridges contributing to strengthening public health functions and services in terms of migration, pinpointing the crucial importance of:

- public health resources and cross-sectoral cooperation: the case of the Mediterranean Programme for Intervention Epidemiology Training (MediPIET) building capacity in the EU enlargement and European Neighbourhood countries with particular focus on global health security; the impact of the programme on capacity building among infectious disease epidemiologists in a small country with a large influx of migrants;
- public health guidance: the case of guidance on screening and vaccination for infectious diseases in newly arrived migrants within the EU/EEA;
- public health policy and advocacy: the case of WHO Global Action Plan to promote the health of refugees and migrants;
- involvement of the affected population in the discussion and decision-making.

The aim of this one-hour session is to stir the debate around migrant health issues and infectious diseases in the European context. The panel will start with a keynote speaker, followed by a lively expert discussion reflecting different perspectives.

Key question/s addressed: How important is cross-sectoral and cross-regional cooperation in terms of migration and public health? How can we approach migration within and to Europe as a benefit for the region?

Keynote speaker:
Khalid Koser
Global Community Engagement and Resilience Fund (GCERF)

Panellists:
Nada Ghosn
Epidemiological Surveillance Unit, Ministry of Public Health, Lebanon

Sally Hargreaves
Imperial College London, UK

Abal Moindazde
France

Isabel de la Mata
DG SANTE, European Commission

PLENARY 3

Bridging towards the future of public health in Europe (I). Where can and should we go from here?

Organized by: European Commission, EUPHA

Moderators: Isabel de la Mata, DG SANTE, European Commission, Natasha Azzopardi Muscat, President EUPHA

Europe is entering the third decade of the 21st century and health is on the agenda. Or is it? It seems that with Europeans healthier than ever and enormously improving our ability to prevent and treat current diseases, health seems to be a theme of the past. At the same time, the society is in turmoil and both old and new health challenges are threatening Europe. The changing demographics–climate change, urbanization, migration and ageing–the technological and digital revolution–given us both medical technology as fake news, genetic mapping and new addictions (gaming)–and the resurgence of old diseases such as measles, all lead to the necessity of bridging our previous successes with the need for a new public health in the future.

In 2019, several changes are occurring: we will have a new regional director for WHO Europe and we will have both a new European Parliament, a new European president of the European Commission, a new European Commission and a new European Commissioner for Health. And these changes have led to a new discussion on the necessity of health as a European topic.

In this plenary session, we will look at the priorities in public health from the perspective of the European Commission, the Finnish presidency of the European Council and the European Public Health Association. Finally, we have invited a young professional to reflect on the plans proposed in this session.

Panellists:
Anne Bucher
Directorate-General for Health and Food Safety (DG SANTE), European Commission

Liisa-Maria Voipio-Pulkki
Ministry of Social Affairs and Health, Finland

Dineke Zeegers Paget
Executive Director EUPHA

Sara McQuinn
Coordinator EUPHAnxt

PLENARY 4

Bridging towards the future of public health in Europe (II). Can we and how do we ensure Health in All EU Policies?

Moderators: Josep Figueras, European Observatory on Health Systems and Policies

The plenary will continue the debate on The future of Public Health in Europe introduced in the previous plenary, tackling the role of the EU and its institutions in ensuring that health is addressed in all EU policies. The EU is firmly committed to implementing the 2030 Agenda and the Sustainable Development Goals through its range of institutional mechanisms. Incoming Commission President von der Leyen has pledged to refocus the European Semester ‘to make sure we stay on track with our SDGs’. These developments, together with the broad recognition of the central role of health in the SDGs and the momentum given by the new EU policy cycle presents a unique window of opportunity to critically reappraise the role of health in the EC, which, at least, on paper makes for an ideal Health in All Policies institution.

The first keynote by Director General Anne Bucher, DG SANTE, will draw on the ‘hot of the press’ results of the November 2019 State of Health in the EU exercise, including the EU Country Health Profiles and the Commission Staff Companion Report. She will highlight the main health and health system challenges faced by EU Member States—ranging from the burden posed by preventable mortality to the vaccination crisis and the resilience of the health workforce.

Prof. Scott Greer’s keynote will contend that to tackle these challenges we need to go beyond Public Health Article 168 and its subsidiarity corset. He will speak to the need to proactively employ the much stronger (health) policy tools within the large body of EU law underlying the internal market and to draw on the EU’s newfound role in fiscal governance such as through the European semester. Prof. Greer will draw on the innovative results of the new edition of the seminal study ‘Everything you always wanted to know about European Union health policies but were afraid to ask’ which will be distributed to participants.

The following panel will debate on the practical implementation and political economy questions arising from the plenary’s postulates. Prof. John Middleton, ASPHER’s president, will address the implications for the Public Health profession such as training in public health leadership, overhauling public health competencies or indeed the understanding of the public health profession itself. The second panellist will address the political economy implications of bringing health across EU policies and how to bypass the complexities of working across policy sectors in the EU institutions. The panel will actively interact with the participating audience through a range of innovative ways.

Panellists:
Anne Bucher
DG SANTE, European Commission

Scott L. Greer
Health Management and Policy, University of Michigan

John Middleton
The Association of Schools of Public Health (ASPHER)

PLENARY 5

Migrant inequalities in urban settings and changing public health practice

Organized by: EuroHealthNet

Moderator: Caroline Costongs, EuroHealthNet

More than half of the world's population now lives in urban areas, and urbanization has significant impacts on the whole of society. Cities are major destinations for internal and external migration alike. Access to services, affordable housing and quality employment in urban areas are challenges common to all vulnerable populations, including migrants. These difficult circumstances–and rising inequalities generally–have strained social inclusion efforts across Europe. In addition, migration has become highly politicized; fake news is used to undermine trust and divide communities. This leads to increased discrimination and is restricting access to education, work, justice and health. Power disparities lead to health inequalities. In this environment, policymakers, civil society actors and community advocates must work collaboratively and creatively across sectors to improve health and social outcomes not only for migrants, but for all vulnerable populations in urban environments. How can public health practice adapt to this context to better address the needs of migrants as well as other vulnerable populations? We should move away from describing the problems to work on the solutions. How can we change public perceptions? How can normative agencies and research institutions respond to and support the needs/challenges of public health practitioners 'on the ground' in cities?

This session will attempt to address these and related critical questions, discussing the way forward for health equity and urban and migrant health while highlighting inspiring case studies.

Topics include:

- What are some of the key 'myths' about migrant communities, living and working in cities, that must be corrected to facilitate social integration and improve service provision? Are migrants a burden on services (health, long term care, social care, childcare) or contributors? Are they receiving more benefits than contributing in taxes? How to respond to discrimination/racism and stigmatization?
- How do we ensure that urban health and social services are person-centred and founded on the principles of proportionate universality? Given the diversity of migration flows to cities, how do we develop appropriate public services for each group, considering cultural dimensions as well as nurture and build on their existing skills and resources?
- What is the role of living and working situations in shaping opportunities and health outcomes for migrants? Can housing, schools, workplaces or urban renewal projects in communities be used to build bridges to other forms of support?
- Where is public health failing and what needs to be changed for improved health and wellbeing and reduced inequalities, giving current contexts as described above? What can be done at the European level to address urban and migrant health issues?

Brief introduction
Caroline Costongs
EuroHealthNet

Setting the scene
Bernadette Kumar
Norwegian Centre for Minority Health Research, Research member of the UCL-Lancet Commission on Migration and Health

WHO perspective
Santino Severoni
Division of Health Systems and Public Health, WHO EURO

Perspective from practice
Lucinda Hiam
GP, Honorary Research Fellow at London School of Hygiene and Tropical Medicine, UK

Perspective from practice
Maryam Gardisi
International Psychosocial Organisation IPSO, Germany

Tying together the big picture
Jean-Paul Moatti
Board of Directors of the Institut de Recherche pour le Développement

3. PARALLEL PROGRAMME

1.A. Poverty homelessness and health

Quantitative research on health determinants in high-income countries: Systematic literature review

Vladimira Varbanova

V Varbanova[1], *P Beutels*[1]
[1]CHERMID, Antwerp University, Antwerp, Belgium
Contact: vladimira.varbanova@uantwerpen.be

Background:

Identifying determinants of health and understanding their role in health production is an important research theme. In recent decades data have become more accessible and multi-country analyses offer an appealing way to potentially enrich such research.

Methods:

We followed the PRISMA guidelines to systematically identify, triage and review literature published between 2013 and early 2018. Forty-three studies that performed cross-national statistical analyses aiming to evaluate the impact of one or more aggregate level determinants on one or more general population health outcomes in high-income countries were selected out of an original yield of 7353. To assess in which combinations and to what extent individual (or thematically linked) determinants had been studied together, we performed multidimensional scaling and cluster analysis.

Results:

Life expectancy and overall mortality were the most widely used population health indicators, while determinants came from the broad categories of healthcare, culture, politics, socio-economics, environment, labor, fertility, demographics, life-style, and psychology. The family of regression models was the predominant statistical approach. Results from our multi-dimensional scaling showed that a relatively tight core of determinants have received much attention, whereas most others were studied in very limited contexts. We consider research findings inconclusive at this time: across a multitude of model specifications, different country samples, and varying time periods, effects fluctuated between statistically significant and not, and between beneficial to health and detrimental.

Conclusions:

We conclude that the quest to understand the underlying mechanisms of population health is far from over and the present state of research on the topic leaves much to be desired. It seems essential that future research always considers multiple factors simultaneously and takes advantage of more sophisticated methodology.

Key messages:

- Provides a broad overview of the current state of research on the topic of determinants of population health in high-income countries.
- Employs an innovative approach examining the degree to which context has been taken into account, as a basis for future research.

Community based approach to address health disparities among Roma in North Macedonia

Borjan Pavlovski

B Pavlovski[1], *J Frishchikj*[1]
[1]Public Health Program, Association for Emancipation, Solidarity and Equality of Women - ESE, Skopje, Macedonia
Contact: bpavlovski@esem.org.mk

Issue:

Roma represent vulnerable group regarding health and health outcomes. Most health research and policies perceive Roma as a coherent group, although there are disparities within different subgroups. This is due to social determinants of health and other causes. Perceiving Roma community as monolith group may result in provision of activities for persons that don't have need and leaving behind the vulnerable. Situation is similar with other marginalized and vulnerable populations.

Description:

In 2016 started community based intervention including social accountability and legal empowerment regarding coverage,quality of health services and health rights violation. Work conducted in ShutoOrizari municipality with estimated 30.000 Roma. In 4 localities where most vulnerable Roma live, each comprised of 200 households. 2 persons from Roma NGOs and 4 community members work as team in 1 locality. Mapping of the community conducted and community inquiry. Findings shared with the community members. Findings used to conduct education of community and toconduct advocacy on local and national level with community participation in 2018for improvement of coverage and quality of services.

Results:

Approach identified disparities among Roma.1256 persons surveyed from 4 localities. 4 localities have high unemployment rate (above 70%),monthly income related to the locality ($p < 0.0002$). Disparities in health and access to health services among localities noted. Self-reported health status is related to locality($p < 0.002$). Coverage with health services also,including having registered gynecologist($p < 0.001$),regular gynecological examinations($p < 0.00001$),antenatal care($p < 0.0003$).

Lessons:

Identifying needs among Roma living in smaller localities enables tailoring of health interventions based on needs. Identification of the problems on micro level is relevant for the community concerned,increasing their involvement in demanding improvement and advocacy.

Key messages:

- Working in strictly defined localities/groups from Roma communities provides accurate insight in the health related issues.
- Working with defined localities/groups enables greater involvement of the community in advocacy for fulfillment of their rights.

Mapping perspectives of inhabitants and professionals in deprived neighborhoods in the Netherlands

Charlot Lugtigheid

JAJ Dierx[1]
[1]Research Group Living in Motion, Avans Hogeschool, Breda, Netherlands
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Background:

People living in deprived neighborhoods have been shown to have several social and health problems such as loneliness, feelings of unsafety, poor diet and overweight, resulting in more sick years (16 years) and shorter life expectancy (6 year; Buck & Maguire, 2015; Murtin et al., 2017). Interventions developed by professionals to reduce health inequalities, seem to have little long term effects possibly due to interventions not matching the perspectives of people in deprived neighborhoods. The present study is performed to map possible differences in perspectives between inhabitants and professionals in deprived neighborhoods using the Triple-I method.

Methods:

The Triple-I method as qualitative research tool (Boonekamp, Dierx & Jansen, in publication) was used to gain insight in how inhabitants ($N = 12$) and health and social professionals ($N = 18$) percieve the deprived neighborhood. Inhabitants and professionals were in separate Triple-I sessions that all took place in a community center within the neighborhood.

Results:

Results show that both inhabitants and professionals want to create more self-reliance of the inhabitants. However, professionals mention their skills in organizing and bringing logic in the actions of inhabitants whereas inhabitants mention their own ability to organize activities themselves. In addition where both mention 'togetherness' as topic, inhabitants refer to this as 'meeting each other', whereas professionals talk about 'constructing powerful networks with inhabitants and other professionals'. According to professionals these networks can 'create feelings of safety', which inhabitants perceive as a result of 'clean and green surrounding'.

Conclusions:

This research corroborates the suggestion that professionals and inhabitants percieve their neighborhood differently. Interventions reducing health inequality might be more effective when approached from the perspective of and even developed and executed by the target group.

Key messages:

- Triple-I method is useable in asset mapping of inhabitants and professionals in deprived neighborhoods in the Netherlands.
- Triple-I mehtod is useable in stimulating physical activities and health in neighborhoods.

Equality of Opportunity and Mortality in Europe

Alexi Gugushvili

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Background:

This study investigates if intergenerational equality of opportunity is linked to mortality in 30 European countries. Equality of opportunity may lead to greater returns on health investments, and, consequently, improvement of health outcomes. In turn, a perceived lack of fairness in the distribution of life chances and limited possibilities for upward intergenerational mobility can cause anxiety among individuals and gradually compromise their health.

Methods:

We used information on parents' and their 163,467 children's Socio-Economic Index of Occupational Status from a large survey data-set to generate three complementary measures of equality of opportunity and linked them to administrative data on total, gender- and cause-specific mortality rates derived from the national statistical offices.

Results:

We found that lower equality of opportunity, measured by the attainment of individuals from the lowest and highest quartiles of socio-economic status and by the overall intergenerational correlation in socio-economic status, was related to higher mortality rates, particularly in relation to diseases of the nervous system and the sense organs, diseases of the respiratory system, and external causes of mortality. Our measures of equality of opportunity were more consistently linked with mortality of men than women.

Conclusions:

Equality of opportunity may be an important explanation of mortality that warrants further research. Measures that aim at facilitating intergenerational social mobility can be justified, not only due to normative considerations of equality of opportunity, but also in terms of individuals' chances to enjoy healthy lives.

Key messages:

- Intergenerational equality of opportunity was more consistently linked to mortality of men than that of women.
- Our key message is that equality of opportunity is not only fair but it is also good for health.

Exploring social inequalities in the use and experience of prenatal care in Brussels

Claudia Schönborn

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Background:

The underlying mechanisms of perinatal health inequalities remain under-researched. A possible explanation is inadequate access to healthcare services and suboptimal care for certain groups. To explore this, our study analyses the mothers' prenatal care trajectories and experiences of care in relation to socioeconomic and migration characteristics.

Methods:

A survey of 750 migrant and non-migrant mothers interviewed in 4 maternity wards in Brussels. Based on the adaptation of the Migrant-Friendly Maternity Care Questionnaire, the survey focuses on mothers with a Belgian, North African (NA) and Subsaharan African (SSA) nationality. The data are analysed through descriptive statistics and logistic regression.

Results:

This ongoing survey has a high response rate (83%). Preliminary subsample analyses ($n = 276$) show that the socioeconomic profiles of mothers vary substantially depending on nationality, with mothers from NA generally having a lower level of education, and mothers from SSA being strongly at risk of poverty. SSA women are particularly at risk of starting prenatal care late (32% compared to 4% of Belgians and NAs) and of having less than 7 recommended consultations (25% compared to 6% Belgians and 9% NAs). Low household income and maternal education were also strong predictors of late and infrequent prenatal care. Women from all three nationality groups had the same rate (10%) of planned C-sections, but women from SSA were much more likely to have an emergency c-section (16% vs 7% of Belgians and NAs). Women with a higher household income were less likely to have a c-section at all. Women from both NA and SSA were less likely to always have understood the information given by healthcare professionals. 90% of women with secondary school education understood all the information, compared to 60% of women without it.

Conclusions:

Women's care trajectories and experiences of care vary strongly depending on their nationality and socioeconomic situation.

Key messages:

- North African and Subsaharan African immigrants in Brussels live in different socioeconomic situations. Their care trajectories and experiences of care also show important differences.
- Socioeconomic characteristics, in addition to women's migration status, are important factors affecting women's perinatal care.

Gender inequality in self-reported health and its evolution in Europe between 2004 and 2016

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Background:

That women generally have worse health than men has long been shown. Yet, the situation in Europe might have changed recently. Gender inequalities have decreased in access to education, employment, and political representation. However, women have increasingly adopted traditionally masculine unhealthy behaviors, such as smoking. Also, the

Great Recession may have hurt women harder, due to their greater socioeconomic vulnerability. This study aims to analyze gender inequalities in 30 European countries, and its evolution over the 2004-2016 period.

Methods:

We used data from the Survey on Income and Living Conditions (SILC), from people between 25 and 64 years old (N = 3,109,150). We modeled the probability of bad/very bad self-reported health as function of gender, adjusting for age, country and year, using logistic regressions. We further adjusted for education and employment. Then, we included interactions of gender and year to test changes in inequalities over time. Finally, we stratified the analysis according to countries grouped based on the Gender Development Index (GDI).

Results:

Women were 16.8% more likely to report bad health (OR = 1.17, $p < 0.01$). Considering education and employment, women were 2.6% less likely to report bad health (OR = 0.97, $p < 0.01$). Over time, adjusting for age, the gender gap reduced from 81.1% (OR = 1.81, $p < 0.01$) in 2004 to 16.4% in 2016 (OR = 1.16, $p < 0.01$), and from 31.5% to 2.5% with socioeconomic adjustment. The reduction was larger in countries with a greater GDI.

Conclusions:

Gender inequality has decreased, but was still present in 2016, in favor of men. This thinning is partly explained by the narrowing of inequalities in education and employment. A greater GDI has favored a larger improvement.

Key messages:

- Gender inequalities in self-reported health have narrowed over 2004-2006, following the narrowing of socioeconomic inequalities.
- A greater GDI has favored a larger improvement in gender inequalities.

Food insecurity and social determinants of students' low adherence to the Mediterranean diet

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Background:

Despite the fact that the Mediterranean diet is highly beneficiary for people's health, there are many factors which cause disparities in the level of adherence. The aim of the present work was to investigate the effect of household food insecurity (FI) on adherence to the Mediterranean diet (AMD), to explore the participants' characteristics modifying the studied relationship and find the social determinants of students' low adherence to the specific dietary pattern.

Methods:

A cross-sectional study with 140 schools and 4,242 students was conducted in Greece (2017-2018). Especially designed and validated instruments were used to record students' sociodemographic characteristics, household's FI status and students' AMD. Analysis of Variance (ANOVA) and Covariance (ANCOVA) was used to investigate the effect of FI and to identify the significant social determinants of students' AMD, according to students' school grade.

Results:

After adjusting for other characteristics, students whose both parents are born in other countries, spend at most 4 hours/week on TV/electronic games, live in the regions of Peloponnese, Central Macedonia or Attica and attend primary schools adhere more to the Mediterranean diet, while higher level of physical activity and lower FI are significantly associated with better AMD. Parents' educational level in nursery schools ($p = 0.002$) and employment status in nursery schools ($p = 0.012$) and in high schools/ lyceums ($p = 0.008$) were found to modify significantly the studied relationship in the univariate analysis, while school grade ($p = 0.013$) and physical activity ($p = 0.088$) were found to modify the studied relationship in the multivariable analysis.

Conclusions:

Several demographic, socioeconomic and lifestyle characteristics were significantly associated with students' AMD. Thus, emphasis should be given on the design of special programs to reduce household FI and intervene in the rest characteristics.

Key messages:

- Researchers and policymakers should consider food insecurity as important risk factor for school-aged children, particularly for those who live in poverty.
- Emphasis should be given on the design of special low-cost programs aiming to reduce food insecurity.

Intercultural opening: participant observation in two hospitals and two outpatient care services

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Background:

The German healthcare system is facing intercultural diversity, since numerous migrant patients, nurses, and doctors are involved. This raises the question as to what extent everyday processes, working cultures and institutional framework conditions change because of this and how intercultural healthcare can be improved.

Methods:

The participant observation took place on 22 days during summer 2018 in two outpatient care services and two hospitals, which show different degrees of intercultural opening (e.g. more or less migrant employees and patients). The aim was to reconstruct the daily work routine of health staff as well as the patients' daily routine. The anonymized records include meetings, care tours, handovers and visits. The observation protocols were analyzed by documentary method and compared on two levels: degree of intercultural opening and sector affiliation.

Results:

The results show that intercultural opening has a sector-specific impact on organization and daily work processes. The health staff of the hospital with high intercultural opening showed routine handling and relaxed reactions to communication difficulties due to the regular care of migrant patients, whereas that of the hospital with low intercultural opening showed stress-related defensive stance due to rare cases. The situation in the outpatient sector is different: The care of migrant patients was perceived to be more costly in the institution with high intercultural opening, because the migrant employees repeatedly perform additional socio-educational work that is not covered by insurance.

Conclusions:

The migration-specific knowledge of employees has a positive effect on patient care in both inpatient and outpatient sector. However, this may be financially disadvantageous for nursing services under the conditions of outpatient care.

Key messages:

- Synergy effects arise from the involvement of migrant health workers and the care of migrant patients.
- Framework conditions must support these synergy effects in order to improve cultural sensitive healthcare.

1.B. Skills building seminar: How to include migrant and refugee populations health monitoring and surveillance in Europe

Organised by: Robert Koch Institute
Chair persons: Claudia Santos-Hövener - Germany, Nicole Rosenkötter - EUPHA (PHMR)
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Objectives:

The level of diversity in most European societies is increasing, especially due to ongoing migration to and within Europe. Migrants are very heterogeneous in terms of reasons for migration, region of origin and chances in the countries of destination and thus, differ greatly in regards to health resources and risks. It is crucial to gain valid data on migrant health status to inform policy makers in order to plan, implement and adjust health interventions and services. This highlights the importance of including migrant populations into health monitoring and surveillance. The objective of this workshop is 1) to demonstrate the importance of including migrants into health surveys, 2) to describe barriers that might hinder migrants from participating, 3) to critically appraise the strategies being used to include migrant populations and 4) to give clear recommendations on how to assure the responsiveness of migrant populations in health monitoring and surveillance. Three countries will present how they reach migrants with national health surveys and focus on selected strategies that increase accessibility of migrant groups. These approaches may include innovative sampling strategies, ways to bridge language gaps and enhancing participation of migrant groups in developing and conducting surveys. We will focus on different migrant groups, including refugees as a particularly vulnerable population. Following the presentations we will have enough time to discuss these strategies in terms of transferability and cost in order to synthesize ideas, learn from each other and discuss pitfalls and lessons learned.

Main messages:

Europe is diversifying, and it is thus crucial to capture migrants' health in health monitoring and surveillance. The national public health institutes are in charge of ensuring sufficient representation of migrant populations in health surveys and to tackle potential barriers. Cross-country collaboration allows sharing successful strategies.

Key messages:

- In a diversifying Europe, it is crucial to include migrant populations into health monitoring and surveillance.
- Approaches include include innovative sampling strategies, ways to bridge language gaps and enhancing participation of migrant groups in developing and conducting surveys.

Collecting high-quality survey data on hard-to-reach populations: lessons from Finland

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Issue:

Hard-to-reach populations refer to groups that may be difficult to involve in research. Minorities and persons with migration background (PMB) are often underrepresented in population-based surveys. This may lead to serious bias. Description of the problem: Several surveys on the health and wellbeing of hard-to-reach populations have been conducted in Finland since 2010. Strategies for collecting high-quality data have been identified in five surveys focused on specific migrant groups (Maamu n = 3000), the foreign-origin population (UTH n = 6000; FinMONIK n = 13650), newly-arrived asylum seekers (TERTTU n = 1087) and Finnish Roma (ROOSA n = 365). Also few routinely collected studies include indicators of ethnic background or origin (e.g. School Health Promotion study).

Results:

Country of birth and foreign origin can be identified in Finland using register-based sampling. Snowball sampling was needed for the Roma population. Strategies to reach participants included information dissemination, translated questionnaires, multilingual personnel, telephone contacts and door-to-door visits. Stakeholders and participants were involved in planning and reporting. Participation rates as high as 70-80% were reached from register-based samples. Lessons: High-quality survey data can be collected on hard-to-reach populations. This requires adequate resources including multilingual personnel and researcher-participant trust. The cross-cultural validity of survey questions is critical; cognitive interviews can be used to improve cultural sensitivity. Researchers should be sensitive of sense of belonging, e.g. PMB may object being seen as "migrants". Members of hard-to-reach populations should be involved in research, and not merely objects of a study.

Main messages:

High participation rates can be achieved with adequate time, financial resources and established researcher-participant trust. Data collection should be inclusive and clearly benefit the individuals and populations in concern.

The IMIRA (Improving Health Monitoring in Migrant Populations) - project in Germany – Lessons learned und implications for health monitoring

Claudia Santos-Hövener

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Background:

A quarter of the population living in Germany are people with a migration background (PMB). In this context, the Robert Koch Institute (RKI) has the task of designing the health monitoring system that has been established in recent years in such a way that PMB are adequately taken into account in statements on the health situation of the German population.

Methods:

The Improving Health Monitoring in Migrant Populations (IMIRA) project was initiated at the end of 2016 with the aim of improving the inclusion of MMH in health monitoring. Literature research, expert interviews and feasibility studies were carried out to identify strategies for access routes, recruitment measures, the dismantling of language barriers and the inclusion of MHH, which are incorporated into the concept of Monitoring 4.0, the further development of RKI health monitoring.

Results:

In order to sustainably improve the accessibility of PMB in RKI health monitoring, a sequential study design with multilingual administration modes is planned within interview surveys. Personal contact through home visits and face-to-face interviews as well as the use of interpretation are essential to increase the willingness to participate. Strengthening the diversity sensitivity of the staff, as well as anti-discriminatory reporting, and promoting the participation of PMB and practitioners are additional components.

Conclusions:

The IMIRA project has led to important findings that will be implemented in the long-term health monitoring of the RKI.

The improved accessibility of PMB for health surveys enables a reflected presentation of the health situation of PMB, which does justice to the heterogeneity of the population living in Germany.

Main messages:

- In order to include PMB sustainably in health monitoring we need to, develop dynamic study designs, bridge language gaps, establish personal contact, increase diversity sensibility and encourage participation of PMB in development of research processes.

1.D. Global health and migration

Dyslipidaemia among Ghanaian migrants in Europe and their compatriots in Ghana: the RODAM Study

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Background:

Sub-Saharan African (SSA) populations are believed to have a favourable lipid profile compared to European populations. However, geographical differences in the lipid profile of a homogenous SSA population residing in different geographical locations have not yet been assessed.

Methods:

We used data from the multicentre, cross-sectional RODAM study including Ghanaian adults residing in rural and urban Ghana and in London, Amsterdam and Berlin (n = 5482). Dyslipidaemias were defined based on the 2012 European Guideline on Cardiovascular Prevention. The age-adjusted prevalence of dyslipidaemias was compared between the sites using prevalence ratios (PRs) adjusted for lifestyle and dietary covariates in different models.

Results:

The age-standardised prevalence rate of high total cholesterol (TC) and LDL-cholesterol (LDL-C) was lower in rural than in urban Ghana and Ghanaian migrants in Europe. Adjusted PRs of high TC and LDL-C were higher in urban Ghana (TC PR = 2.15, 95% confidence interval 1.69-2.73) and Ghanaian migrant men (TC PR = 2.03 (1.56-2.63)) compared to rural Ghana, but there was no difference between rural and Ghanaian migrant women (TC PR = 1.01 (0.84-1.22)). High triglyceride levels were as prevalent in rural Ghana (11.6%) as in urban Ghana (12.8%), but were less prevalent in Ghanaian migrant women (2.0%). In both sexes, low HDL-cholesterol was most prevalent in rural Ghana (50.1%) and least prevalent in Europe (12.9%).

Conclusions:

The lipid profile of Ghanaians varied by geographical location, and differential gradients of the individual dyslipidaemias could be observed between the locations. Additional research is needed to identify factors driving these differential risks in order to assist prevention efforts.

Key messages:

- The lipid profile of Ghanaians in urban Ghana and Europe is less favourable compared to the lipid profile of rural Ghanaian residents.
- Substantial differences in lipid profiles could be observed between the geographical locations.

Metabolic syndrome among Ghanaian migrants and their homeland counterparts: the RODAM study

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Background:

Metabolic syndrome (MetSyn) is a major risk factor for type 2 diabetes (T2D) and cardiovascular disease (CVD). T2D and CVD are a major burden among African populations both in Africa and in high-income countries. However, it is unknown whether the prevalence of MetSyn shows geographical differences between a homogenous population residing in different settings in Africa and Europe.

Methods:

We used data from the cross-sectional multi-centre Research on Obesity and Diabetes among African Migrants (RODAM) study that was conducted among Ghanaians aged 25-70 years residing in rural and urban Ghana and in Amsterdam, London and Berlin (n = 5659). MetSyn was defined according to the 2009 harmonized definition. Geographical locations were compared using age-standardised prevalence rates and prevalence ratios (PRs), adjusted for age, education, physical activity and smoking.

Results:

In men, the age-standardised prevalence of MetSyn was 8.3% in rural Ghana and showed a positive gradient through urban Ghana (23.6%, PR = 1.85, 95% confidence interval 1.17-2.92) to Europe, with the highest prevalence in Amsterdam (31.4%; PR = 4.45, 2.94-6.75). In women, there was a rural to urban gradient in MetSyn prevalence (rural Ghana 25%, urban Ghana 34.4%, PR = 1.38, 1.13-1.68), but small differences in MetSyn prevalence between urban Ghanaian and European Ghanaian women (Amsterdam 38.4%). The prevalence rates of the individual MetSyn components showed a positive rural-urban-Europe gradient. However, compared to their urban and European counterparts, a low HDL-C level was significantly more prevalent among rural Ghanaians.

Conclusions:

MetSyn and its components are highly prevalent in Ghana as well as in Ghanaian migrants in Europe. To understand the mechanisms driving the geographical differences in MetSyn, further research is needed, thereby aiming for the reduction of T2D and CVD prevalence in SSA populations.

Key messages:

- Metabolic syndrome is more prevalent in urban compared to rural Ghana, and even more prevalent in Ghanaian migrants in Europe.
- Its components show the same positive gradient, expect for low HDL-C, which shows a negative gradient.

Hyperuricemia And Estimated Cardiovascular Risk Among Migrant and non-migrant Africans

Felix Chilunga

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Objective:

In the advent of rapid urbanization, migration and epidemiological transition, the extent to which serum uric acid (sUA) affects cardiovascular disease (CVD) risk among Africans is not well understood. We assessed differences in sUA levels and associations with estimated CVD risk among migrant Ghanaians in Europe, and non-migrant Ghanaians in rural and urban Ghana.

Methods:

Baseline data from 633 rural, 916 urban and 2315 migrant RODAM study participants (40-70 years) were analyzed. Hyperuricemia was defined as sUA >7mg/dl in males and >6mg/dl in females. Elevated CVD risk was defined as pooled cohort equation estimates $\geq$ 7.5%. Logistic regressions were used to assess differences in hyperuricemia and associations with estimated CVD risk. Receiver operator curves were used to calculate sUA cut off values that maximised likelihood of elevated CVD risk.

Results:

Prevalence for hyperuricemia in rural, urban and migrant participants were 17.4%, 19.1% and 31.7% for men, and 15.9%, 18.2% and 33.2% for women, respectively. Hyperuricemia was positively associated with elevated CVD risk among rural residents(adjusted OR for men 2.88, 95%CI, 1.20-6.88, 5.32, 95%CI, 2.86-9.95 for women), urban residents(1.26, 95%CI, 0.59-2.69 for men, 2.41, 95%CI, 1.56-3.73 for women) and migrants(2.39, 95%CI, 1.57-3.64) for men, 3.74, 95%CI, 2.78-5.02 for women). SUA cut-off values were 6.8mg/dl in men and 5.2mg/dl in women.

Conclusions:

Our study shows variations of sUA levels in different African contexts. Hyperuricemia is associated with elevated estimated CVD risk in both migrants and non-migrants. Further studies should identify factors driving associations between SUA and CVD risk in Africans.

Key messages:

- Hyperuricemia is a risk factor for cardiovascular risk in both migrants and non-migrants.
- Cardiovascular risk is seen at low levels of serum uric acid levels in Africans.

''Queer Migrants Welcome'' in Public Health Teaching

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Background:

People with heterogeneous sexual orientations and gender identities are rarely the focus of public health research or teaching. LGBTQ people (Lesbian, Gay, Bisexual, Transgender, Queer) are particularly at risk of being discriminated against in accessing and using health care. In order to give students of public health a perspective that is sensitive to diversity and which will allow them to consider LGBTQ people in their future research, teaching and practice, these topics must be actively reflected on during their studies.

Methods:

A website was built by a team of students of the Bachelor degree program in Health Communication at the School of Public Health, Bielefeld University in Germany. The aim of this course was to learn about the health situation and risks of LGTBQ people. One main emphasis of this project was to develop a medium that focuses on the perspective for newcomers, migrants and refugees in the context of LGTBQ health in a participatory way.

Results:

The students developed an understanding of LGBTQ, migration and health largely independently through individual research and group discussion, decided to create an English-language website (https://queermigrantswelcome.jimdofree.com) and present existing findings in blog posts they wrote on their own. The pictures on the homepage were drawn by the students themselves, as they perceived the freely available LGBTQ pictures as too stereotypical. They contacted counselling centres for LGBTQ persons throughout Germany and asked in which language they offer counselling and have included these counselling possibilities on the homepage.

Conclusions:

Already at the Bachelor's level, students can design innovative media that can improve the health care of marginalized people and contribute to the dismantling of discriminatory structures. It is important that the students are given sufficient freedom to make their own decisions and identify with the topic, thus facilitating a major learning process.

Key messages:

- Desiderates in health communication can be reduced by well accompanied student projects.
- The topic LGBTQ must be implemented in the curricula of public health study programmes to reduce discrimination in health care.

Vaccination status of migrant populations in EU/EEA countries and implications for VPD control

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Background:

Migrant populations in the EU/EEA are increasingly being associated with outbreaks of vaccine-preventable diseases (VPDs), including the large-scale measles outbreak currently ongoing across Europe; however, it is unclear to what extent migrants represent an under-immunised group in the European context and implications for VPD control. Ensuring high levels of vaccination coverage is a key priority for all countries through the European Vaccine Action Plan, with EU/EEA Member States committed to eliminating measles and rubella, sustaining polio-free status, and controlling hepatitis B infection. We synthesised existing EU/EEA data to assess under-immunisation in migrants (defined as foreign born) residing in EU/EEA countries.

Methods:

We did a systematic review and meta-analysis (PROSPERO CRD42018103666) in accordance with PRISMA guidelines. Inclusion criteria were primary research studies pertaining to vaccination status (measles, mumps, rubella, diphtheria, tetanus, pertussis, polio and Haemophilus influenzae type b [Hib]) in migrants residing in all EU/EEA countries. Pooled prevalence (95% CIs) were calculated for the meta-analysis using a random effects model.

Results:

56 studies met our criteria (14 EU/EEA countries); 36 studies, which included data from 80,432 migrants, were included in the meta-analysis. Vaccination status of migrants for key VPDs varied substantially, with pooled immunisation coverage well below the herd immunity threshold (HIT) targets for measles 80% (95% CI: 73-87%; HIT 92-95%), mumps 65% (95% CI: 48-82%; HIT 75-86%), and diphtheria 51% (95% CI: 29-73%; HIT 83-86%). Polio type 1 and 2 coverage was high (97% [95% CI: 95-98%]; 95 [95% CI: 92-97%], respectively).

Conclusions:

Migrants represent an under-immunised group in Europe, thus a high priority group for catch-up vaccination. Innovative strategies to engage them in vaccine uptake will be critical if we are to make European targets for the elimination and/or control of key VPDs.

Key messages:

- Migrants represent an under-immunised group in Europe and a high priority group for catch-up vaccination campaigns.
- Innovative strategies to engage them in vaccine uptake will be critical if we are to make European targets for the elimination and control of vaccine-preventable diseases.

1.E. Workshop: Comparative Public Health: Politics, science, and professionalism

Organised by: University of Michigan
Chair persons: Marleen Bekker - EUPHA (PHPP), Karine Chevreul - France
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Look around EUPHA, or any other public health conference. Public health is difficult to define, in theory and in practice. Its boundaries are all blurred, whether with medicine, schools, environmental protection or workplace safety inspectorates. Too often, we overstate the similarities between public health systems among countries. Efforts to promote networks, good practice, and even basic coordination have been undermined for decades by misunderstandings born of different educational, organizational, financial and political systems. The lack of comparison, and comparative political analysis in particular, also means that countries can have very similar debates about the proper nature and scope of public health, an about who is to blame for deficiencies, without awareness of when they are distinctive and when they are actually part of larger trends.

This project aims to identify and explain variation in the scope and organization of public health systems in selected high-income countries. Based on a formalized comparative historical analysis of Austria, France, Germany, Poland, the United Kingdom and the United States, researchers in the study first mapped the various axes of divergence: workforce composition, organization, levels of government, relationship to medicine, and the extent to which public health encompassed adjacent areas such as environmental health and occupational health and safety. For each country we then followed both case studies (communicable disease control including vaccines, HIV/AIDS, tobacco control, diet and nutrition, occupational health and safety) as well as the legislative history of the public health field in order to identify its changing organization and scope. It then identifies the relative role of historical legacies, changing science, burden of disease and politics in explaining patterns of both divergence and convergence.

This workshop presents four country specific case studies (France, Germany, United Kingdom and the United States) that identify the most important forms of variation and the political, scientific and professional drivers of convergence and divergence.

Key messages:

- Political organization and scope as images of public health are grossly under-researched and nonexistent in a comparative nature.
- Understanding the scope and organization of public health in different countries will permit better lesson-drawing and identification of relevant and effective levers of change.

France: A Public health system built on competing paradigms

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Background:

Although France helped establish public health as a scientific discipline, it is well known that the country was slow to implement public health measures on a national scale. The central government played a limited role in public health until the second half of the 20th century. Public health became a privileged space for political action in the 1990s, as a direct outcome of the ''blood crisis'' and a series of other health ''scandals''.

Methods:

A comparative historical analysis (CHA) based on government documents, law, and secondary sources.

Results:

Between the early 1990s and 2016, France saw the emergence of two competing understandings of public health. It was legally defined as a responsibility of the state to protect its population against disease risks and to ensure equal access to and representation in the healthcare system, captured by the notions of sécurité sanitaire (''health security'') and démocratie sanitaire (''health democracy''). Public health actions framed in the language of ''security'' changed its place in the hierarchical structure of the state. It both reinforced public health as a legitimate field of intervention (now presented as an important function of government, similarly to finance, foreign affairs, defense, etc.) and reinforced the central state, as the legitimate protector of population health and provider of public health services. The French public health arena also witnessed the (re)emergence of local and private actors, motivated by their own interests and competing understanding of public health.

Germany: The reformation of public health

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Background:

Germany was amongst the most successful advocates and implementors of public health ideas in the 19th and early 20th centuries. Dominated by the social hygiene theory in the early 1900s population health was a main priority. With the recognition that bacteria caused diseases in both animals and humans municipal and national public health programs peaked resulting in increased research and education in the field. With the aftermath of WWII, public health in the country seemingly disappeared until the 70s when the AIDS epidemic forced it out of hiding.

Methods:

A comparative historical analysis (CHA) based on government documents, law, and secondary sources.

Results:

Germany is still struggling to elevate public health to the same level of importance and respect that curative health enjoys. Despite its many shortcomings (limited tobacco control, the struggle to integrate public health and medicine, and the lack of recognition for public health scholars, researchers and doctors), largely due to its collapse after WWII, the German public health system can be seen as transformational in the sense that it is giving public health a new and perhaps more timely role namely that of a health advocate.

Conclusions:

Public health in Germany has undergone a number of transitions throughout the past centuries moving from a practice initially based in economic theory with the goal of improving sanitation onto being increasingly supported by eugenics and with that the policing of an entire population to finally landing in the 21st century with the intention of advocating for European level public health agencies focusing on monitoring and reporting.

The United States: A system built on fragmentation

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Background:

The United States is effectively a laboratory for ways to produce public goods, such as public health, on the cheap. Its

c. 90,000 governments compete for residents, businesses, taxes, development, and jobs while also trying to compensate for the lack of universal health care coverage. They all have structural incentives to provide services as cheaply as possible. The effects are diverse and poorly mapped. They can mean innovation in organizational forms, a different and typically less expensive skill mix among the workers, poor quality, or simple under provision. The exact mix can often be hard to identify. It can also mean extreme responsiveness to funding from higher levels of government such as the states or federal government.

Methods:

A comparative historical analysis (CHA) based on government documents, law, and secondary sources.

Results:

The distinctively expansive scope of US public health actions is largely due to the country's failure to establish a universal health care system, and the diversity of US public health tasks reflects local adaptation of tens of thousands of governments. This means that public health in the United States retains much of the activity it had in, for example, the UK before the establishment of the US. In particular, and even in states that accepted the Medicaid expansion in the Affordable Care Act (ACA), local public health departments provide a substantial amount of direct care and fill in for gaps in health care provision.

Conclusions:

The US public health system is highly fragmented like the governments that run it, and therefore diverse. Reflecting the failures of the US health care system, it carries out many more tasks that in other countries are seen as health, especially primary, care.

The politics of public health in the United Kingdom between medical, social, and local

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Background:

Public health in the UK exists on a continuum from a national and medical pole to a local and social pole, with each end threatening obliteration as a distinctive field of expertise and action. The national-medical produces a subfield of medicine, with a range of highly developed skills including epidemiology. The local-social, manifested in social medicine as well as equivalent approaches in social work, education, and local government, produces health, which need not be medical, as a result of investment in integrated services that enable solidary, dignified communities. This model is more invested in local communities and local governments, and more likely to blur borders with social work, leisure, and other areas, and have an overtly social democratic ethics and set of arguments.

Methods:

A comparative historical analysis (CHA) based on government documents, law, and secondary sources.

Results:

Public health in the UK has changed shape many times, from the end of most formal public health between 1948 and 1974, to the creation of a public health function in the 1980s, to the moment of divergence in 2012 when England reverted to a local public health and the devolved administrations did not.

Conclusions:

The scope of public health might formally be the causes of avoidable ill health. In practice, the accepted expertise and autonomy of public health is found in narrower areas related to medicine: communicable disease control, health education, a few social services such as outpatient and outreach mental and sexual health, and the search for politically acceptable policies to address NCD threats. With public health moved to local government in England, its relationship with the NHS and medicine is likely to weaken further, to the likely detriment of the formal public health function and public health.

1.F. Predictors of adolescent health and well being

Effectiveness of school-based interventions to prevent anxiety & depression in young people

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Background:

The prevalence of anxiety and depression is increasing among children and young people (CYP). Evidence suggests 1/2 of mental illness is apparent by age 14 and 3/4 by early adulthood. Globally, there is growing interest in prevention of anxiety and depression in CYP.

Methods:

We report the findings from a systematic review and network meta-analysis (NMA) of school-based interventions to prevent anxiety and depression in CYP. NMA enables the simultaneous comparison of multiple interventions in a single evidence synthesis, retaining the identity of each intervention analysed and ranking of interventions according to the probability that each is best for a given outcome. Bayesian analyses were conducted in OpenBUGS, & random effects NMA were conducted for the primary outcomes of post-intervention self-report anxiety and depression.

Results:

NMA were conducted for universal and targeted populations, in primary, secondary & tertiary educational settings. In universal primary settings, there is no evidence that any intervention reduced depression or anxiety. In universal secondary settings, CBT & mindfulness-based interventions suggest a reduction in anxiety symptoms relative to usual curriculum but was not observed for depression symptoms. In targeted secondary settings, exercise appears effective for reducing anxiety symptoms relative to no intervention. For prevention of depression symptoms, CBT appears effective. In targeted primary settings, there is no evidence that any intervention is effective. Few tertiary institution-based interventions met our inclusion criteria.

Conclusions:

standard meta-analyses require lumping over interventions such that intervention specific effects may be masked (e.g. psychological intervention vs control). This NMA has identified the specific interventions which may prevent anxiety and depression in CYP. However, we observed considerable uncertainty and no intervention appears effective across every population and setting.

Key messages:

- Network meta-analysis enables the simultaneous comparison of multiple interventions in a single evidence synthesis, retaining the distinct identity of each intervention analysed.
- We observed considerable uncertainty for effectiveness of school-based interventions to prevent anxiety and depression. No single intervention appears effective across every population and setting.

Are lifestyle behaviors correlated to mental health disorders in medical students?

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Background:

Recently, there has been a renew interest to medical students' mental health, which may be influenced by several socio-demographic and cultural factors, academic overload, but also by lifestyle behaviours. This study aimed to assess the correlation between major lifestyle behaviors and mental health in medical students.

Methods:

A cross-sectional questionnaire survey was conducted among 521 medical students randomized from different levels, at Southern Tunisia Medical School, 2017. The 12-item General Health Questionnaire (GHQ-12) and the Simple Lifestyle Indicator Questionnaire (SLIQ) were used to assess mental health and lifestyle, respectively.

Results:

The mean values of GHQ-12 and SLIQ were 4.1±2.8 and 6.2±1.4, respectively. According to SLIQ components, we noted an unhealthy lifestyle in 36.9%, 50.1% and 20.2% for diet, physical activities and stress level, respectively. The prevalence of psychological distress (GHQ-12$\geq$4) was 50.1%. The GHQ-12 items analysis revealed that 235 cases (45.1%) were unable to concentrate, 237 cases (45.5%) felt unhappy and depressed and 195 cases (37.4%) had a loss of sleep over worry. Low family financial situation (Odds Ratio (OR) = 1.5;95%CI = [1.1-2.3]), internship level, (OR = 1.8;95%CI = [1.1-3.3]) and medium/poor academic performance (OR = 2.2;95%CI = [1.5-3.2]) were significantly associated with psychological distress. Multivariate analysis showed that unhealthy lifestyle was independently associated with psychological distress (Adjusted OR = 5.8;95%CI = [2.4-14.8]).

Conclusions:

Our study highlighted the magnitude of psychological distress in medical students. Unhealthy life style was a potential predictive of mental disorders. These findings are extremely useful for guiding future curricular changes upon entry into medical schools.

Key messages:

- Mental disorder prevalence ranked at an alarming rate among medical students.
- Promoting healthy life style represents a reliable tool to sustain a good quality of life for the future-doctors.

Higher Education Students' Mental Health Problems: Results from the Norwegian SHOT study

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Highly educated people have better health than those without education. The number of young adults pursuing higher education is increasing; In 2015 almost half the Norwegian adult population had completed higher education (1). Studies have investigated horizontal stratification (i.e. differentiation within higher education) effects on labor market outcomes, but few have studied health returns from education (2). Data stem from a recent national student health survey from 2018 for higher education in Norway (the SHoT2018-study; N = 50 054, response rate = 30.8%). We examined the associations between level of ongoing education (One-year program, Bachelor, Master, longer professional education) and mental health problems measured with Hopkins Symptoms Checklist (HSCL-25; 3. There was a pattern of decreasing symptoms of mental health problems with level of study program, F (5,49782) = 103,34, $p < .001$. The results formed a monotonic relationship; each level of increased education was associated with significantly less mental health problems. There was no difference between the Masters and professional programs. We found evidence of horizontal stratification of mental health problems in this large sample of Norwegian college and university students. The observed association may have three explanations; causality may run from schooling to health (4), it may run from health to schooling (5), or both may be determined third factors. Further studies should investigate mechanisms such as stigma and social status in relation to the observed associations (6,7).

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Key messages:

- Increasing numbers of young adults pursue higher education, it is therefore important to investigate educational inequalities within higher education.
- College students pursuing higher education (masters or professional programs) have fewer mental health problems relative to college students enrolled in higher education, but at lower levels.

Chronic sleep deprivation and adolescent health: Two longitudinal studies of youth in Western Canada

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Background:

Chronic exposure to insufficient sleep may increase depression and poor health in adolescents who are particularly vulnerable to changes in sleep and neuro-cognitive development. The cumulative effects of persistent sleep deprivation on adolescent physical and mental health, and potential gender differences, are unknown. We investigated whether cumulative sleep deprivation is linked to sub-optimal health or depression in youth (13-18 y).

Methods:

Longitudinal self-reported data (2011-2012) included three measures of sleep times and two of self-rated health (SRH) and depression (CESD). Missing data were multiply imputed using variables related to primary and secondary analyses for SRH (n = 3104) and CESD (n = 3071). Multivariable regression models with interaction terms estimated gender-specific associations; post-estimation calculated adjusted mean depression scores across levels of cumulative sleep deprivation.

Results:

We found 11% of youth (56% females) in BC were chronically sleep deprived. Cumulative exposure to sleep deprivation was not associated with SRH in adolescents (all P-values $\geq$ 0.097), but was associated with increased risk of depression in young women only. Young women reporting chronic sleep deprivation had higher mean CESD scores (19.48 [17.59-21.38]), compared to counterparts reporting no history of sleep deprivation (16.59 [15.72-17.45]). No associations were seen in young men. Findings were robust to changes in model re-specification.

Conclusions:

Results indicated that chronic sleep deprivation may be an important determinant of mental health outcomes in adolescents, particularly young women, although there was little support for effects on overall health status. Chronically impaired quality of sleep should be considered in future longitudinal work. Public health efforts to promote mental health for young people may require relevant strategies to support young women in achieving recommended amounts of sleep.

Key messages:

- Chronic sleep deprivation showed no association with adolescents' self-rated health.
- Chronic sleep deprivation was linked to a higher risk of depression in young women only.

Italian adolescents and sexual health: what has changed during the last 20 years?

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Background:

In the majority of European countries, sex education is mandatory, but Italy is still an exception. Despite sexually transmitted diseases (STD) are believed to be less common today, long-time "forgotten" disease, as syphilis, are returning. The aims of study are i) to examine the knowledge and perceptions of adolescents regarding sex education and STD and ii) to compare our results with Italian national survey.

Methods:

This descriptive cross-sectional study was conducted in 6 middle schools in Siena (Italy) during May-June 2018. Data were anonymous collected using a validate questionnaire previously adopted by the Italian National Institute of Health (NIH). The results were compared with the national survey realized in 1998 by NIH. The analysis was performed using Stata 12.

Results:

From 691 questionnaires, 540 returned fulfilled (78% response rate). The majority (95%) of respondents considered sex education "important" and thought it should be guaranteed by the school; 48% described information received so far as "sufficient", 40% as "adequate". "School" was indicated as the principal source of information (44%), instead of "friends" which resulted in 1998. The respondents were asked to choose from the list the STDs they knew: 96% indicated "AIDS", 62% "syphilis", 38% "HBV" and 36% "gonorrhoea". In comparison to 1998, knowledge of syphilis has decresed (2018:17% vs. 1998:62%) and HBV (2018:38% vs. 1998:58%). Regarding STD, the "mass media" were cited as the principal source of information (56%), followed by "school" (41%) and "General Practitioner" (20%).

Conclusions:

In comparison to 1998 sex education in Italian schools improved, but the knowledge of adolescents regarding the STD worsened. This result can be attributed to the fact that the survey of 1998 was realized during the years when the AIDS awareness was higher. It is necessary to further improve the sex education in Italy in order to prevent STDs.

Key messages:

- The "forgotten" sexually transmitted diseases are becoming common again, the adequate sex education in schools is necessary to prevent them.
- In confrontation to 1998, the sex education in Italian schools improved, but the knowledge of adolescents regarding the STD worsened.

Does adolescents like modern sports experiences? A trivial question for a major public health stake

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Background:

Improving adolescents' levels of sport and physical activity 'PA' is an official public health issue. However, national and European studies showed decline in overall levels of PA of European adolescents. In France, a school-based study showed a decrease in sport participation among adolescents of Marseille and area. Despite of this decline, we do not know whether they have a positive appreciation of modern sports experiences promoted in clubs. In this study, we aimed to measure French adolescents' athletes retrospective reports of pleasure in these experiences.

Methods:

A previous data collection among a representative sample of adolescents' students was used (n = 1132). Adolescents were separated into 4 subgroups based on sex (Boys/Girls) and socioeconomic status 'SES' (Low/High). The Sport Experiences Questionnaire was used to measure retrospective reports of pleasure in competition, progress and risk-taking experiences. Multivariate linear regressions were performed to show differences between sex, SES and setting of participation (competition/no-competition). Densities diagrams were also presented.

Results:

Among girls and boys, the setting of participation was significantly positively linked to reported pleasure. This effect was greater for competition experiences, respectively 1.45-fold and 1.53-fold increase for competition than no-competition players, for boys and girls. Among girls, high-SES girls presented a lower appreciation of competition experiences than their counterparts with low-SES. This relationship was observed in non-competitive (B = -0.62, p-value = 0.016) and competitive (B = -0.70, p-value = 0.025) settings. Finally, progress experiences were appreciated by all.

Conclusions:

These results may help to step back traditional instituted sports offer. They would help to develop sports initiatives adapted to adolescents' tastes. Finally, progress experiences may be gold experiences in sport and should be promoted in all context of participation.

Key messages:

- Modern sport experiences are not appreciated by all subgroups of adolescents. Endeavors to improve sport participation of adolescents should adapt contents to adolescents' tastes.
- Pleasure in competition and risk-taking are linked to setting of participation and adolescents' SES. The progress experiences may be the gold standard of sports experiences.

Adolescents with intellectual disability (ID) and their perceptions of activity and sports

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Background:

Individuals with intellectual disability (ID) are less physically active than individuals without ID, and they rarely or never reach the recommended daily level of physical activity. It is understood that both social interaction and ability in performing work tasks affect participation in daily activity services among people with ID. Individuals with ID generally have a higher risk of hypertension and obesity-related cardiovascular disease than individuals without ID. Professional service providers and parents are often those being asked, it is more seldom that the knowledge comes from the target group (ID) themselves.

Aim:

To identify experiences and feelings among adolescents with ID regarding activity and sports participation, and to identify how they express and perceive the opportunities they have for being active in the community and surroundings where they live, including body and health awareness.

Methods:

12 adolescents with ID, boys and girls, from Mid-Sweden participated in the study. The participants took part in a semi-structured interview that focused on experiences and aspects regarding activity and sports in their surroundings. Interviews identified three aspects: Activity, Surroundings, and Body- and health awareness. Adolescents with ID seems motivated to participate in activities and sports. The role of significant others, family and friends, support and the feeling of joy all seem crucial when reporting being outdoors, participating in ball games and in music activities. They are aware of limitations, sometimes feel bullied and are afraid of being excluded. Participation in activities and sports may be positively associated with health, but limitations such as awareness and support from society challenge the perception of 'fitting in' experienced by adolescents with ID. There is a need for deeper understanding to implement and follow up on the UN convention on rights for individuals with ID, as well as the 2030 sustainable development goals.

Key messages:

- The project aims to identify how individuals with ID can increase their participation in societal activities and hence feel more active and included as citizens.
- Special attention is given to include stakeholders in order to promote implementation and long-term success.

Psychosocial difficulties, obesity and disadvantage in a cohort of Irish children

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Background:

Childhood obesity is stabilising in Ireland, but less so in children from disadvantaged backgrounds. There is also evidence for a relationship between psychosocial difficulties and obesity in youth, but findings are often mixed. This study aimed to describe the relationships between psychosocial difficulties, obesity, and disadvantage in a national cohort of children in Ireland.

Methods:

Participants (n = 7275) were surveyed and measured at age nine and thirteen as part of the Growing Up in Ireland study (GUI). Psychosocial difficulties were measured using the Strengths and Difficulties Questionnaire (SDQ). Disadvantage was represented by the education status of the primary caregiver. BMI was calculated using measured height and weight. Weight status categories were created using the UK 1990 Growth Data. Correlation analyses were used to examine the relationship between child BMI and SDQ scores. Associations between weight categories, psychosocial difficulties and education status were examined using Chi-square analysis.

Results:

In children whose parents had secondary education, the obesity rate was 27.9%, compared to 24.7% in those with a college degree ($p < 0.01$). This relationship was also significant at age thirteen (<0.01). Furthermore, BMI was positively correlated with SDQ total score, ($r = .107$, $p = 0.01$) at age nine and at age thirteen ($r = .089$, $p = 0.01$). A significant association was also found between weight status categories and psychosocial difficulties at ages nine ($p < 0.1$), and thirteen ($p < 0.1$). Further findings will be reported following a preliminary longitudinal analysis.

Conclusions:

Obesity is associated with psychosocial difficulties, as well as the education status of the primary caregiver, in a large sample of Irish children. These findings are important for understanding the relationship between childhood obesity and psychological health and have implications for the treatment of obesity in young people.

Key messages:

- There are higher rates of obesity in children whose parents do not have a college degree.
- Childhood obesity remains a serious public health issue, and is associated with psychosocial difficulties in an Irish cohort of children.

1.G. The burden of multiple chronic conditions

Prospective study on chronic diseases and healthcare costs for the south of France region, 2016-2028

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Background:

In France, Health Regional Agencies (HRA) have to elaborate a Public Health Plan for the 5 coming years. For estimating future population health needs and associated costs to adapt the health services on the regional territory, the HRA in southeastern France requested a prospective analysis, based on demographic and epidemiologic scenarios about major chronic diseases, to evaluate future trends.

Methods:

Six chronic diseases were selected: diabetes (1 or 2), cardiovascular diseases, respiratory diseases, cancers, neurological diseases and dementia. We used medico-administrative data from the National health insurance fund, and adapted algorithms to identify people with these diseases. We calculated prevalence rates according to gender and age and used two alternative scenarios (a constant one, and a trend-based one) to estimate the number of people with chronic diseases in 2023 and 2028, starting in 2016. We also estimated future healthcare costs according a constant and a trend-based scenario.

Results:

The algorithms detect reasonable rates of disease compared to official rates available for 2016. Due to demographic (ageing) and/or epidemiologic trends, the number of people with chronic diseases will highly increase during the next ten years in the South of France region. For instance, between 2016 and 2028, there will be from 15% to 20% more people with diabetes. Associated costs will also be higher (+33% between

2016 and 2028), especially those granted to nursing care (+40%).

Conclusions:

Burden of diseases and health expenditures are going to increase in the future. Projections are needed to help policymakers anticipating the required health services adaptation. Medico-administrative database are an invaluable source of data to do so. The next step of this project will consist in estimating those trends for smaller geographical areas.

Key messages:

- Data of the French Health Insurance fund can be used to predict future prevalence of chronic diseases and healthcare costs.
- South of France will face a main increase of people with chronic diseases.

Patients with more comorbidities have better detection but poorer management of chronic diseases

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Background:

The burden of non-communicable diseases (NCDs) is rising rapidly in middle-income countries (MICs), where NCDs are often undiagnosed, untreated and uncontrolled. How comorbidity impacts diagnosis, treatment, and control of NCDs is an emerging area of research inquiry and have significant clinical implications as highlighted in the recent National Institute for Care Excellence (NICE) guidelines for treating patients suffering from multiple NCDs. This is the first study to examine the association between increasing numbers of comorbidities with being undiagnosed, intreated, and uncontrolled for NCDs, in six large MICs.

Methods:

Cross-sectional analysis of WHO SAGE Wave 1 (2007-10), which consisted of adults aged $\geq$18 years from six populous MICs including, China, Ghana, India, Mexico, Russia and South Africa (overall n = 41, 557).

Results:

Higher number of comorbidities was associated with better detection of hypertension, angina and arthritis, and better odds of having treatment for hypertension and angina. However, increasing comorbidity had the opposite effect on being uncontrolled, and was associated with increased odds of uncontrolled hypertension, angina, arthritis, and asthma. Comorbidity with concordant conditions was associated with improved diagnosis and treatment of hypertension and angina. Comorbidity with concordant conditions was not associated with decreased nor increased odds of being uncontrolled for all NCDs.

Conclusions:

Patients with more comorbidities have better diagnosis of chronic conditions, but this does not translate into better management and control of these conditions. Improving continuity of care and monitoring treatment are priorities for health systems with ageing populations.

Key messages:

- Patients with more comorbidities have better diagnosis of chronic conditions.
- but this does not translate into better management and control of these conditions.

The concurrence of chronic diseases among unemployed and employed persons: a register-based study

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Background:

The first aim of this study was to describe the prevalence of chronic diseases and multimorbidity among employed and unemployed persons. The second aim was to investigate associations of sociodemographic characteristics with the prevalence of chronic diseases and multimorbidity.

Methods:

Data linkage of large-scale registries on employment status, medication use and sociodemographic characteristics for all Dutch residents in 2016 was applied. In total, 5,074,227 subjects aged 18-65 years were included in the study. The prevalence of six common chronic diseases and multimorbidity was investigated among unemployed and employed persons. Multivariate logistic regression analyses were performed to examine associations of sociodemographic characteristics with the prevalence of chronic diseases and multimorbidity.

Results:

Unemployed persons had a higher prevalence of psychological disorders (18.3% vs 5.4%), cardiovascular disease (20.1% vs 8.9%), inflammatory diseases (24.5% vs 15.8%), and respiratory illness (11.7% vs 6.5%) compared to employed persons. Unemployed persons were more likely to have one (OR 1.30, 95% CI 1.29-1.31), two (OR 1.74, 95% CI 1.73-1.76) and at least three chronic diseases (OR 2.59, 95% CI 2.56-2.61) than employed persons. Older persons, women, lower educated persons and migrants were more likely to have one, two, and at least three chronic diseases. Especially at younger ages, psychological disorders and inflammatory conditions were more prevalent but declined from middle age onwards among unemployed persons, whereas as slight increase from middle age onwards was observed among employed persons.

Conclusions:

Using objective data, this study provided evidence for inequalities in the prevalence of chronic diseases and multimorbidity, indicating employment status to be an important determinant of health. Policy measures and health interventions should target chronic diseases and multimorbidity, especially among unemployed persons.

Key messages:

- Using objective data, this study showed that unemployed persons had a higher prevalence of chronic diseases and multimorbidity compared to employed persons.
- In particular older persons, women, lower educated persons and migrants were more likely to have chronic diseases and multimorbidity.

Depressive symptoms, neuroticism and participation in breast and cervical cancer screening in the UK

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Background:

Globally, more than 2 million women are diagnosed with breast or cervical cancer every year. Depressive symptoms and personality traits have been implicated in cancer-related mortality, but the potential mechanisms through which these associations may operate are not well understood. We aimed to assess how depressive symptoms and neuroticism are associated with participation in breast and cervical cancer screening.

Methods:

273 402 women in the UK Biobank cohort who were eligible for breast cancer screening (aged 50-70 years) and/or cervical cancer screening (<65 years) at baseline recruitment (2006-10) and those with follow-up data (2014-March 19) were identified. Depressive symptoms (4 items from Patient Heath Questionnaire) and neuroticism (12 items from Eysenck Personality Inventory Neuroticism Scale) were self-reported at baseline. The primary outcomes were reporting being up to date with breast and cervical cancer screening. For prospective analyses, patterns of screening participation from baseline to follow-up were derived. Logistic regression was used to analyse associations, adjusted for potential confounders.

Results:

More severe depressive symptoms (range 0-12) were associated with reduced screening for breast (OR = 0.960, 95% CI: 0.950,0.970) and cervical cancer (OR = 0.958, 95% CI: 0.950,0.966). Prospective analyses revealed higher baseline depressive symptoms were related to decreased cervical cancer screening at follow-up (OR = 0.955, 95% CI: 0.913,0.999; equivalent to a difference of 4.08% between the highest and lowest depressive symptom score), but not with breast cancer screening. Results for overall neuroticism were inconclusive, but individual neuroticism items including anxiety and nervousness were related to increased screening participation.

Conclusions:

More severe depressive symptoms may act as a barrier for cancer screening participation and could be an indication for more proactive strategies to improve uptake.

Key messages:

- Women with more severe depressive symptoms are less likely to be up to date with their breast and cervical cancer screening, which may exacerbate existing health inequalities.
- Interventions to increase screening participation among women with poor mental health may be merited.

Socioeconomic trajectories and risk of hospitalization in the Moli-sani Study cohort

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Background:

A life course approach was used to explore the impact of socioeconomic status (SES) on risk of hospitalizations for all-cause and for cardiovascular disease (CVD).

Methods:

Longitudinal analyses on 19,999 subjects apparently free from CVD and cancer, recruited in the Moli-sani Study, Italy (2005-2010). Low and high SES in childhood, educational attainment (low/high) and SES during adulthood (measured by a score including material resources and dichotomized as low/high) defined the trajectories over life course. First hospital admissions were recorded by direct linkage with hospital discharge form registry. Hazard ratios (HR) with 95% confidence interval (95%CI) were calculated by multivariable Cox-regression.

Results:

Over a median follow up of 7.3 y, we ascertained a total of 7,594 all-cause and 2,539 CVD hospitalizations. Poor childhood SES was associated with 11% and 17% increased risk of all-cause and CVD hospitalizations, respectively. Among subjects with poor childhood SES, an upward trajectory in education was associated with lower risk of hospital admission for all-cause (HR = 0.85; 95%CI 0.76-0.94) and CVD (HR = 0.78; 0.64-0.95), as opposed to subjects remained stably low (low education and adulthood SES). Individuals with high childhood SES, but not educational achievement, were at 26% increased risk of hospitalization for any cause, as compared to the stably high SES group, while failure to achieve both educational and material advancements was associated with 37% higher risk of CVD hospitalization.

Conclusions:

In a large sample of healthy adults, social mobility (educational and/or material upward trajectories) was associated with lower incidence of hospital admissions for all-cause and CVD.

Key messages:

- Social mobility may counterbalance the negative health burden associated with low early-life SES.
- High SES in childhood poorly affects hospitalization risk if no additional achievements across life course occur.

1.H. Prediction and control of health care costs

No UHC without medicines: out-of-pocket payments for non-communicable diseases in 18 countries

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Background:

In 2014 the United Nations agreed on a goal to reduce premature mortality from NCDs by improving financial risk protection. We are far from achieving this: households with NCDs are at an increased risk of catastrophic health spending and impoverishment, particularly in lower middle- and low-income countries. There is a need to better understand the drivers of health spending among households with NCDs, to inform interventions aimed at achieving universal health coverage.

Methods:

Using data from the Prospective Urban and Rural Epidemiology Study, we analyse out-of-pocket expenditure (OOP) among households with NCDs (cancer, cardiovascular disease, hypertension, diabetes, respiratory disease or kidney disease) in 18 countries: Canada, Sweden, Brazil, Chile, Malaysia, Poland, South Africa, Turkey, China, the Philippines, Colombia, Iran, the Occupied Palestinian Territory (OPT), Bangladesh, India, Pakistan, Zimbabwe and Tanzania.

Results:

The leading driver of OOP on health care in almost all countries included is medicine. For example, the monthly OOP on medicines among NCD households in Iran, where roughly 18% of NCD households experience catastrophic spending, is USD 13.50, representing 36% of OOP on health. In Brazil this figure is USD 25.85, representing 46% of OOP on health. A large proportion of OOP is also made up by consultation fees, particularly in Sub-Saharan African countries. In Poland, 63% of OOP on health is spent on alternative medicine consultation fees.

Conclusions:

Our findings echo the message shared by the Director General of the World Health Organization in 2018, that there is ‘‘no Universal Health Coverage without access to quality medicines’’. Medicine costs impose a significant economic burden on NCD households in countries at all levels of development, highlighting the need to include essential medicines for NCDs in universal health coverage benefit packages.

Key messages:

- To achieve the goal of improved financial risk protection for NCDs we need to understand drivers of out-of-pocket spending among households with NCDs.
- Medicines are by far the largest driver of OOP in countries at all levels of development and require urgent attention to ensure universal health coverage.

Economic evaluation of the Austrian telephone-based triage system

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Background:

In order to reduce avoidable consultations but also avoidable self-referrals to hospital outpatient departments, the Austrian authorities agreed to establish a voluntary telephone-based triage system in the course of the health reform 2013. Three regions piloted the system in early 2017.

Methods:

An economic evaluation aimed to assess the impact on health service demand after having consulted the telephone-based system. For analysing the impact, we used the conceptual model of ''shift cases'' from one particular service setting such as outpatient clinic to another (e.g. GP office) and calculated savings realised through patient shifts. Based on potential savings in private and public costs and running costs of the service, we identified threshold values for cost-effective operation.

Results:

In total, approximately 45,000 completed telephone consultations were registered in the pilot phase. 2,500 persons were advised to conduct self-care whereas more than 40,000 were recommended to contact a health service provider with differing levels of priority. Adherence to the initial recommendation of the provider setting was 70%, the level of priority was met in 90%. With regard to the economic impact, public savings of shift cases range from €31 (self-care instead of GP consultation) to €198 (GP/specialist instead of hospital outpatient clinic). Public costs ranged between €10 and €50 depending on the degree of capacity utilisation, contingency costs and duration of calls. Therefore, economic net gains can be realized if approximately 15% to 25% of callers choose a lower care setting due to the consultation service.

Conclusions:

The tele-triage service has shown to be a potentially cost effective tool but largely depends on user uptake, patient adherence and local maintaining costs. In order to exploit the full potential of the system, policy makers are advised to promote the use of the system in general and to evaluate the used algorithm.

Key messages:

- Telephone-based triage systems are a potentially cost-effective strategy in order to reduce avoidable encounters both on a primary care level but also at hospital outpatient clinics.
- The public savings of a shift in the provider setting vary substantially depending on the level of service delivery with diminishing savings for shifts in lower levels.

Activity-based hospital payments: a qualitative evaluation by Israeli managers and physicians

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Background:

Israel has expanded procedure-related group (PRG) payments instead of per-diem payments for hospitals. There is scarce literature that documents the process of adoption of DRGs and its entailed economic incentives according to hospital workers' perspectives. Important issues remain underexplored such as how managers transmit the incentives and considerations to caregivers, how physicians embrace (or not) these new rules of the game.

Methods:

We used qualitative, grounded-theory analysis based on 35 semi-structured in-depth interviews with managers, financial directors, surgical ward heads and physicians in 5 hospitals, sampled by maximum variation according to hospital characteristics.

Results:

We found two main themes: incentives for change and barriers to change. The most significant change was the creation of a common professional language, which facilitates measurement and supervision of activities, outcomes, and profitability. Measurement enhances transparency and is essential for resource management. Respondents also reported barriers inhibiting their responsiveness to the economic incentives of PRGs: a complicated coding system; inappropriate pricing; dependency on numerous production factors; lack of transparency; lack of coordinated goals among players; and other medical or moral considerations that outweigh or co-exist with financial considerations.

Conclusions:

The adoption of PRGs led to changes in managers' and physicians' actions and considerations, particularly in situations where it was possible to reprioritize elective procedures without harming patient health or quality of care. However, on a broader level, the impact was modest, leading mainly to a fairer redistribution of resources and the rearrangement of work, such as shifting patients to after-hours. It would be appropriate to allow hospitals and physicians to operate in a less restricted market where regulation allows suppliers some degree of discretion so they can react to the PRG reform.

Key messages:

- Provider payment reforms change economic incentives, behavior and decision-making.
- However, structural barriers and other non-economic considerations may lead to unintended consequences of such reforms.

Expansion of activity-based hospital payment in Israel: evaluation of effects on inpatient activity

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Background:

In 2013-14, Israel stepped up the replacement of per-diem payments by Procedure-Related Group (PRG) based hospital payments, a local version of Diagnosis-Related groups (DRGs). PRGs were created for selected procedures in urology, general surgery, gynecology and ophthalmology. We analyzed how did this change affect inpatient activities, measured by the number of discharges, average length of stay (ALoS), and the case-severity Charlson Comorbidity Index (CCI).

Methods:

We investigated the impacts of the PRG-payment reform on 15 procedures. Observations covered groups of inpatients, by age and gender, who underwent these procedures in 2005-2016 at all non-profit hospitals. We examined the effect of the payment change on the number of discharges, ALoS and CCI using a multivariable analysis of Ordinary Least Squares controlling for patients, hospital characteristics, and year fixed-effects.

Results:

Data on 89,533 patients were examined. During the study period, the ALoS decreased except for one procedure, the number of inpatients increased for most procedures, and case severity remained stable. The multivariable analysis suggests that the transition to PRG-payments contributed to changes in ALoS or case severity for only 3 out of 15 procedures examined. The PRG-reform contributed to changes of 10%-45% in the number of patients, but there was no clear trend: it increased in 9, and decreased in 5. The changes did not follow a clear pattern according to procedures' price changes after the reform.

Conclusions:

Factors that may have hampered the effects of the PRG-reform are conflicting incentives created by other co-existing hospital-payment components, such as revenue caps and retrospective subsidies, and the lack of resources to increase productivity.

Key messages:

- Provider payment reforms should carefully coordinate the entire payment system, otherwise the incentives may be blurred.
- Uncoordinated reforms may miss their goals.

Impact of mental illness on in-patient hospital costs for somatic disorders and associated factors

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Background:

People suffering from mental disorders are in poorer somatic health that the general population. This is due in part to poor quality of care in primary care settings, which can in turn have a major impact on hospitals and healthcare systems, in particular in terms of costs. Our objective was to assess the economic burden of acute care admissions for somatic diseases in patients with a mental illness compared to other patients and analyse the factors associated with it.

Methods:

An exhaustive study using French hospital discharge databases was carried out between 2009 and 2013. Total acute hospital costs were calculated from the all payer perspective (statutory health insurance, private health insurances and patient out-of pocket payments). A multivariate regression modelled the association between mental illness and hospital costs while adjusting for other explanatory variables, with and without interaction terms.

Results:

37,458,810 admissions were included in the analysis. 1,163,972 patients (6.54%) were identified as being mentally ill. Mean total hospital costs at five years per patient were €8,114. Costs per mentally ill patient were on average 34% higher than for a non-mentally patient (€10,637 vs. €7,949). A longitudinal analysis of costs showed a widening of the gap between the two groups as time went by, from 1.60% in 2009 to 10.51% in 2013. In the multivariate model, mental disorders were significantly associated with increased costs, and interaction terms found an increased impact of mental illness on costs in deprived patients.

Conclusions:

Improving quality of primary care and health promotion in people with a mental illness both for their own sake and to decrease the economic burden on the healthcare system, is of vital importance.

Key messages:

- There is a significant increase in hospital costs for somatic care in patients with a mental illness compared to other patients, in particular in patients who are also deprived.
- It is necessary to improve primary care and health promotion in mentally ill patients, for their sake and for the sake of healthcare systems.

Outsourced management service to guarantee safety and cost-effectiveness in pediatric cardiac surgery

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Background:

Children's hospitals deal with young patients, who have greater variability than adults, therefore size of the medical devices ranges from the newborn to the adult-like patient. This complexity is associated with higher costs to ensure safety and logistics. In June 2014 Bambino Gesù Children's Hospital (OPBG) adopted an outsourced service for medical device acquisition and stock records for the execution of cath-lab and heart surgery interventions.

Goal:

To evaluate the services effectiveness multi-dimensionally in terms of cost saving, safety, outcomes and operator satisfaction. We measured costs and indicators in pre and post intervention. Materials and methods. We compared the years from 2013 to 2017 in terms of cost-related device and prosthesis consumption, including mean costs per intervention using ANOVA with Tukey's Post-hoc test. To evaluate the clinical proxy outcome we calculated the pediatric index of mortality for each year.

Results:

In 2013-2017 we performed a mean of 1985 (ds 140) procedures per year with devices, the sample is homogeneous in size and clinical complexity. The trend shows a solid decrease of expenses after the service introduction: we observed a reduction of 20% of the mean consumption per intervention between year 2013 and year 2017 (1707€ vs 1391€) $P < 0.001$. For what concerns outcomes we noticed a reduction of Standardized Mortality Ratio index from 0.51 to 0.27 (CI 0.18-0.42) in 2014-2017.

Discussion:

Outcome indicators excludes any increase of risk following the adoption of the service. The hospital pharmacy did not receive any reports regarding incidents attributable to the service. The nurses evaluated the service positively regarding the availability, traceability of the devices and decrease of the warehouse work.

Conclusions:

Outsourced service has been cost saving, safe and well accepted by operators and in our opinion is replicable also in other highly complex pediatric hospital settings.

Key messages:

- Children hospitals are associated with higher costs to ensure safety and logistics in surgery and cath-lab with medical devices.
- Outsourced management service can promote cost saving and safety.

Diagnosis and Treatment of Malignant Pleural Mesothelioma (MPM) Care Pathway and its cost analysis

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MPM is one of the most serious professional cancer with a high frequency in subjects previously exposed to asbestos. Several trials have been made or are ongoing to define an effective therapy to allow a longer survival and to reduce its burdensome management by the health systems. The few MPM Care Pathways (CP), which have been suggested by groups of experts of scientific community, are only a list of practicable interventions without the structure of a pathway so the aims of this paper are the declination of possible cases of a MPM CP and the quantification of the costs using a regional consensus CP, verifying its application.

The diagnostic and therapeutic procedures of the regional CP were defined starting to a sample of 34 patients treated in public regional hospitals for MPM, diagnosed in 2015, and having.at least a one year follow up. The costs were attributed using the regional price list for outpatient health activities and the DRG for hospitalized activities. The formed cost accounting model was applied in order to calculate the cost for the public regional administration. Last, the obtained results were discussed with surgical thoracic surgeons of the three regional university hospitals.

The developed cost accounting model has identified three cases of a MPM CP. They present a common diagnostic phase (7.246,90€) following by three possible treatments, differently combinable between them: surgery (10.808,00€), chemotherapy (164,00€ + drug cost for access) and observation (41,00€). The cost will be due to the specific combination of the three treatments plus the diagnostic phase, predictable according to patient's age and staging, which can afford each patient affected by MPM.

The contribution of the cost accounting model applied to the consensus regional CP for MPM allows to assess the care's appropriateness of the cases actually treated. It could be used also for CPs of other diseases and as a method for institutional financing of the route.

Key messages:

- Relevance of a shared Care Pathway realisation for a rare, highly letal and complex professional disease.
- An accurate and scientific costs analysis model to a C is an innovation.

1.I. Surveillance and control of infectious diseases

Area deprivation and notifiable infectious diseases in Germany: A longitudinal small-area analysis

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Background:

Socioeconomic inequalities may affect the infectious disease incidence. We studied the association between area deprivation and incidence of notifiable infectious diseases in Germany to understand spatio-temporal patterns and the effects of societal factors on disease epidemiology.

Methods:

Using national surveillance data of 401 districts from 2001 to 2017, we examined the incidence of infectious diseases using spatiotemporal Bayesian regression models. We analyzed eight disease classes: blood-borne viral hepatitis, gastrointestinal, vaccine preventable, vector-borne, zoonotic, other bacterial, other infectious, and overall burden of infectious diseases. As explanatory factors we considered area deprivation (measured by the German Index of Multiple Deprivation), fraction of non-nationals, sex, age, and spatiotemporal effects.

Results:

A risk gradient across deprivation quintiles was observed for the overall burden of infectious diseases. The relative risk (RR) for gastrointestinal diseases in areas with medium and high deprivation relative to low deprivation was 1.65 (95%-credible interval [CrI] 1.01-2.54) and 2.64 (1.22-4.98), respectively. The RR for vector-borne diseases was 1.89 (1.27-2.73) in districts with high deprivation compared to areas with low deprivation. Lower risks in highly deprived areas relative to low deprived areas were identified in vaccine-preventable diseases (RR = 0.39; 0.14-0.88) and zoonoses (RR = 0.69; 0.48-0.96). For blood-borne viral hepatitis, other bacterial, and other infectious diseases no association with area deprivation was observed. Spatial risks of infections were predominantly concentrated in eastern parts of Germany and changed marginally over time.

Conclusions:

The risks of infections tend to be higher in more deprived areas and in eastern parts of Germany, but they varied by class of disease. Our results can guide measures of infectious disease control and prevention by considering spatial risks and deprivation.

Key messages:

- Area deprivation has both positive and inverse associations with the incidences of infectious diseases in Germany. Regions with increased risks may benefit from targeted public health measures.
- Spatial risks of infections tended to be higher in eastern regions of Germany. Disparities in the incidence of infectious diseases may be still present between western and eastern Germany.

Sustainable Development Goals and the challenge of Human resources for health in Congo

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Background:

In order to achieve the Sustainable Development Goals (SDGs), equitable access to skilled and motivated health workers within a performing health system is need to be ensured. The health system in Congo is characterized by low quantity and quality of Human resources for health (HRH), which constitutes an important barrier to achieving to expanding coverage and integrated primary health care.

Objectives:

To estimate needs of HRH in Congo from 2019 to 2030 and analysed the capacity of the country to address the estimated needs.

Methods:

Cross-sectional study was conducted in Ministry of Health from June to November 2018. Data from 2011 national HRH Census was used as the baseline for projections. We performed annual projections based on current numbers of midwives, nurses and physicians. Health workforce-population ratios by year in national and department level were provided. Population estimations were computed using Spectrum software assuming a 3% growth rate. Mapping for distribution by department was performed used QSGI software.

Results:

In 2019, Congo has 4849 midwives, nurses and physicians, including 465 doctors, 912 midwives and 3469 nurses. All of Congo departments have not surpassed the availability threshold of 4, 5 midwives, nurses and physicians per 1000 inhabitants in 2019. In overall, this ratio will rise from 0.9 per 1000 inhabitants in 2019 to 0.42 per 1000 inhabitants in 2030 due to the retirement. Needs for additional workforce were estimated at 29416 midwives, nurses and physicians by 2030, average of 2451 per year. However, current national production capacity of human resources for health is very low and will not cover the estimated needs as scheduled.

Conclusions:

There is a crisis in the health workforce in Congo, expressed in acute shortage. Results highlight needs of building adequate policies to address production and management of the health workforce, to come close to reaching the MDGs for health.

Key messages:

- At current production capacity, Congo has not the number of physicians, nurses, and midwives it needs to address HRH shortages in the national Health system by 2030.
- The health human resources crisis in sub-Saharan Africa countries will be a major obstacle to achieving the Millennium Development Goals.

Untreated alcohol use disorder in people who inject drugs: a major barrier to HCV treatment uptake

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Aims:

Although people who inject drugs (PWID) are the core at-risk population in the hepatitis C (HCV) epidemic in industrialized countries, few initiate treatment. Alcohol use disorder (AUD), common within this population, has been identified as a barrier to HCV treatment uptake in the general population. We investigated whether the arrival of new and well-tolerated HCV treatments (direct-acting antivirals: DAA) has improved HCV treatment uptake in French PWID compared with former treatments (pegylated interferon-based treatments: Peg-IFN).

Methods:

Analyses were based on exhaustive care delivery data collected between 2012 and 2016 (study period) in the French national healthcare reimbursement database. Chronic HCV-infected individuals who received opioid agonist therapy (OAT) at least once during the study period were included. Separate analyses were performed for 2012-2013 (Peg-IFN era, 19,700 patients) and 2014-2016 (DAA era, 22,545 patients). Using discrete-time Cox proportional hazards models, we tested for associations between AUD (i.e. AUD-related long-term illness status, diagnosis coding during hospitalization or AUD pharmacological treatment) and first HCV treatment delivery, after adjusting for gender, age, complementary universal health cover, liver disease severity and type of OAT received.

Results:

Incidence rate of HCV treatment uptake per 100 person-years [95% confidence interval] was 6.56 [6.30-6.84] and 5.70 [5.51-5.89], for Peg-IFN-based treatment (2012-2013) and DAA (2014-2016), respectively. After multiple adjustment, people with AUD not receiving related medication had 30% and 14% lower Peg-IFN-based treatment and DAA uptake, respectively, than those without AUD (hazard ratio [95%CI]: 0.70 [0.62-0.80] and 0.86 [0.78-0.94]). No difference was observed between those treated for AUD and those without AUD.

Conclusions:

Despite the benefits of DAA, untreated AUD is still a major barrier to HCV treatment access for PWID in France.

Key messages:

- AUD is still a barrier to HCV treatment for French PWID.
- DAA availability improved HCV treatment uptake for PWID with AUD.

Discrimination of people living with hiv/aids: a survey with dentists in Abidjan, Côte d'Ivoire

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Background:

Despite several decades of fighting HIV infection, discrimination against people living with this infection persists, even among health professionals. Understanding the determinants of discriminatory attitudes of dentists is a first step towards access to oral health care and improved care for people living with HIV (PLHIV). Objectives: To analyse the determinants of discriminatory attitudes towards people living with HIV among dentists in Côte d'Ivoire.

Methods:

A cross-sectional survey was conducted among dentists in Abidjan in 2016. In addition to socio-professional characteristics, a questionnaire collected information on their knowledge about HIV (transmission, hiv-related oral diseases) and their individual perception (fear of being contaminated, cross-contamination...). The chi^2 test for independent sampling was used to identify factors associated with discriminatory attitudes (threshold $\alpha = 5\%$).

Results:

A total of 120 dentists were interviewed: 61.3% from the public sector; 56.7% men; 54.2% in couple; 53.3% had participated in continuing education on HIV; 29.2% did not know HIV-related diseases and transmission modes and 69.2% reported fear of being infected during care; 44.2% reported informing staff of the patient's HIV status. The proportion of dentists with discriminatory attitudes was estimated at 69.2%. The main associated factors were: female gender ($p = 0.001$), living in couple ($p = 0.000$), lack of knowledge of the risk of HIV transmission after a blood exposure accident ($p = 0.000$), the law protecting people living with HIV in Côte d'Ivoire ($p = 0.009$) and fear of being infected ($p = 0.000$).

Conclusions:

The results of this study show that the determinants of discriminatory attitudes among dentists result from their lack of knowledge of the disease, justifying the need to strengthen their continuing education on HIV/AIDS infection.

Key messages:

- Dentists discrimination towards people living with HIV infection result from their lack of knowledge about the infection.
- It's essential to strengthen their knowledge about HIV in order to improve access to care for people living with HIV.

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Predictors of overall mortality among people living with HIV/AIDS in Brazil, 2007-2015

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Background:

In Brazil there are 926,742 people living with HIV/AIDS (PLWHA). Despite the introduction of antiretroviral therapy (ART) in 1996 and treatment for all in 2014, mortality has increased in some regions. This study aimed to estimate the factors associated with overall mortality in PLWHA to recommend public health actions.

Methods:

We studied PLWHA aged $\geq$18 years old, followed-up from 2007 to 2015 in the universal health system in Brazil. We used a national database (disease reporting, laboratory tests, ART and death notifications). Kaplan-Meier method and Cox model were used in survival analysis. The outcome was all-cause deaths. The explanatory variables measured at baseline were sociodemographic characteristics, HIV transmission mode and coinfections by hepatitis B (HBV) and C (HCV). The time-varying variables were CD4 cell count, viral load (VL) and ART status.

Results:

Study population (n = 411,281) was mainly male (61%), under 40 years old (61%), Caucasian (37%), with basic education (43%), heterosexual HIV-infection mode (41%), resident in Southeast region (48%). The co-infection rate was 2.5% for HCV, and 1.4% for HBV. Median time to ART initiation was 83 days. During the follow-up period (median: 4 years), 61,757 deaths occurred (6% HCV-coinfected and 2% HBV-coinfected). The global mortality rate was 3.44 [95% confidence interval: 3.42-3.47] per 100 person-years (PY) during 1,793,417 PY. The factors associated with increased mortality in multivariable analyses were male gender, age over 40, non-Caucasian race, HIV infection by drug use, resident in North, Northeast and South regions, HCV and HBV coinfection, VL $\geq$ 200 copies/mL and starting ART with CD4<200 cells/mm3.

Conclusions:

Although PLWHA start ART in less than 3 months after the beginning of follow-up, there is still late treatment (at CD4<200 cells/mm3). Screening should target all populations regardless of risk group. Coinfected individuals should also be early treated for HCV and HBV infections.

Key messages:

- The results of our study show that all populations should be target for HIV screening regardless of risk group.
- PLWHA coinfected with hepatitis B and hepatitis C should be also early treated for hepatitis coinfections.

1.K. Epidemiology and management of mental illness

Life events as predictors for depression in men and women: A Finnish twin study

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Background:

Depression is more common in women than in men, but reasons for the sex/gender difference are not fully known. We analyzed sex/gender differences in the association of past life events (LE) with depression, and if the associations are independent of genetic liability.

Methods:

In the 2011 survey of the Finnish Twin Cohort (participation 72%, n = 8410, 45% men, mean age 60 yrs), depression was assessed using the Center for Epidemiologic Studies Depression (CES-D) scale (cut off value $\geq$20) showing depression in 13% (11% in men, 15% in women). LE were assessed as negative, positive, and serious (traffic accident, other accident, fire and natural catastrophe, physical abuse, sexual abuse, violent crime, and parental divorce) ones in childhood and/or in adulthood. Pearson's chi-squared test and age- and sex-adjusted logistic regressions were used to model the strength of associations. The effect of familial factors was tested using conditional logistic regression in 176 genetically identical (MZ) twin pairs (38% male) discordant for depression.

Results:

Women experienced more both negative LE (50%/42%, $p < 0.001$) and positive LE (60%/40%, $p < 0.001$) than men. Accidents, physical abuse and violent crime were reported more by men, but women reported more sexual abuse (14%/1%, $p < 0.01$). All LEs were associated with depression (adjusted Odds Ratios [OR] from 1.24, 95% Confidence Intervals [CI] 1.09 - 1.42 to OR 6.91, 95% CI 3.88 - 12.30). Women with physical abuse or violent crime in childhood or in adulthood were more vulnerable for depression than men. High magnitude of negative LEs in both sexes, low rates of positive LE in women, and physical abuse in women remained significantly associated with depression within MZ pairs suggesting independence from familial factors and genetic liability.

Conclusions:

We found sex difference in LE prevalence and in vulnerability for depression. These do not appear to be accounted for by familial effects.

Key messages:

- We found differences between women and men in life event prevalence and in vulnerability for depression.
- Differences in life experiences and exposures between women and men should be considered in prevention and treatment of depression.

The Economic and Mental Health Impact of IAPT: Pragmatic Trial in Three English Regions

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Background:

Improving Access to Psychological Therapies (IAPT) programme is the English's major initiative for treating anxiety and depression, currently provided to over 1 million people.

We tested whether IAPT could reduce healthcare costs and improve employment in persons with long-term chronic conditions.

Methods:

Stepped-wedge design of two cohorts covering 560 patients each with depression and/or anxiety and comorbid long-term physical health conditions, namely diabetes, chronic obstructive pulmonary disease (COPD) and cardio-vascular disease (CVD) from three areas in Thames Valley (Berkshire, Oxfordshire and Buckinghamshire) for the period March 2017 - August 2017. Panels were balanced. Difference-in-difference models were used and intention-to-treat analysis.

Results:

Based on the step-wedge modelling, IAPT treatment decreased costs by £497 (95% CI: -£770 to -£224) total per person (pp) (from £1266 pp before starting the treatment to £768 pp since the treatment started)in the first 3 months. Results also showed a decrease by about 5.55 [95% CI: -6.35, -4.75] (-4.18 [95%CI: -4.91, -3.45]) points per person in the PHQ9 (GAD7). Our results show that IAPT increased the probability to an employment for those who were unemployment by about 7.92% (95% CI: 0.94% to 14.9%).

Conclusions:

IAPT treatment significantly reduced healthcare utilization and costs among persons with chronic conditions. It also significantly increased the probability of employment.

Key messages:

- IAPT treatment significantly reduced healthcare utilization and costs among persons with chronic conditions.
- IAPT was significantly associated with increased probability to find employment for those unemployed.

Are Patients with Subclinical Hypothyroidism at Risk of Depressive Symptoms?

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Introduction:

Subclinical hypothyroidism (SHypo) may be associated with negative health outcomes including depressive symptoms. However, the evidence is conflicting.

Methods:

We conducted a systematic review and individual participant data (IPD) meta-analysis to assess the association between SHypo and depressive symptoms. We requested IPD from cohorts identified through a systematic literature search. The exposure was thyroid function at baseline (SHypo vs. euthyroid; SHypo defined as thyroid stimulating hormone $\geq$ 4.5 mlU/L, in combination with normal free thyroxine). The outcome was depressive symptoms at first follow-up, measured on any validated scale. We calculated conversion factors to convert all scores into the Beck Depression Inventory (BDI) scale (range: 0-63, higher scores indicate more depression, minimal clinically important difference: 5). We performed a two-stage IPD meta-analysis. In each cohort, we estimated the mean difference (MD) in depressive symptoms scores between those with SHypo and euthyroid controls adjusted for depressive symptoms at baseline. Further, we adjusted the multivariable linear regression analysis for age, sex, education, and income. We pooled the study effect estimates by using a random effects model. Heterogeneity was assessed by I2.

Results:

Among six cohorts, we analyzed data from 23,367 participants (65% female, mean age 60.3±13.2 years, SHypo N = 1,463). There was no difference in BDI scores between SHypo (10.6) and controls (10.2) at baseline. After a mean follow-up of 8.2±4.3 years, BDI scores did not differ between SHypo and controls (pooled MD 0.3, 95% CI -0.2 to 0.7, I2 14%). Results remained robust in several sensitivity analyses, and no subgroup at increased risk for depressive symptoms could be identified.

Conclusions:

In this IPD meta-analysis, SHypo was not associated with the development of depressive symptoms. Depressive symptoms do not seem to be an indication for levothyroxine therapy in SHypo.

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Key messages:

- Individual studies about the association between subclinical hypothyroidism and depressive symptoms show conflicting results.
- In this IPD meta-analysis from six prospective cohort studies, patients with subclinical hypothyroidism did not have an increased risk to develop depressive symptoms during a mean follow-up of 8 years.

Effectiveness of Prompt Mental Health Care: Preliminary results from a randomized controlled trial

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Background:

Prompt Mental Health Care (PMHC) service is a Norwegian initiative, adapted from the English ‘Improved Access to Psychological Therapy’ (IAPT), aimed at improving access to primary care treatment for anxiety and depression. Thus far, both PMHC and IAPT have been evaluated by cohort studies only. Albeit yielding promising results, the extent to which these are attributable to the treatment thus remains unsettled. This study investigates the effectiveness of PMHC compared to treatment as usual (TAU) at six months follow-up.

Methods:

Randomized controlled trial with parallel assignment in two PMHC sites from November 2015 to March 2018. Participants were 681 adults (aged $\geq$18 years) considered for admission to PMHC due to anxiety and/or mild to moderate depression. These were randomly assigned on a 70:30 ratio. Main outcomes were recovery rates and changes in symptoms of depression and anxiety between baseline and follow-up. Primary outcome data were available for 73%/67% in the PMHC/TAU group. Sensitivity analyses based on observed patterns of missingness were conducted.

Results:

A reliable recovery rate of 58.5% was observed in the PMHC group and 31.9% in the TAU group, yielding a between-group effect size (ES) of 0.61 [95% CI 0.37-0.85, p<.001]. The differences in degree of improvement between PMHC and TAU yielded an ES of -0.88 [95% CI -1.23-0.43, $p < 0.001$] for symptoms of depression and -0.60 [95% CI -0.90-0.30, $p < 0.001$] for symptoms of anxiety in favour of PMHC. All sensitivity analyses pointed in the same direction with small variations in point estimates. Findings were slightly more robust for depressive than anxiety symptoms.

Conclusions:

The PMHC treatment was substantially more effective than TAU in alleviating symptoms of anxiety and depression. This adaptation of IAPT is considered a viable supplement to existing health services to increase access of effective treatment for adults who suffer from anxiety and mild to moderate depression.

Key messages:

- This study is the first to evaluate the effectiveness of an IAPT-like treatment model in terms of a randomized controlled trial.

- Prompt Mental Health Care was substantially more effective than TAU in alleviating symptoms of depression and anxiety at 6-months follow-up.

Mental illness prevention in post-ACS men: A partcipatory action research

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Background:

The prevalence of social determinants of health (i.e. rurality, low education and poverty) among men put them at an elevated risk for comorbid cardiac disease and mental illness. While, men are particularly vulnerable to mental illnesses (i.e. depression, anxiety) after an acute coronary syndrome (ACS), they are typically averse to seeking medical care, especially for mental health issues. Targeting interventions to at-risk population groups is a well documented approach. However, little in the literature presents how to prevent mental illness in cardiac men. This study aims to develop, implement and pilot a psychoeducational program tailored for post-ACS men.

Methods:

A mixed method including a scoping review, a qualitative study and a quasi-experimental pilot study.

Results:

In total, 42 articles were retrieved to extract key components of cardiac men-sensitive psychoeducation programs. We led 22 focus groups and 14 semi-structured interviews (119 men in total). The mean age was 51.2 years [45-77]. We integrated the gathered data gathered from the scoping review and the qualitative study to develop a psychoeducational program (3 group sessions). The pilot study involved 48 men who completed the baseline, the 3-month and the 6-month data collections. We observed 80% of compliance. Findings show a significant improvement in PHQ-9, GAD-7, IES-R, CSI and EQ-5D scales. We also observed changes in the CMNI-22, a measure of attitudes, beliefs, and behaviors associated with both traditional and non-traditional masculine gender roles. Men appreciated the time flexibility (sessions were scheduled based on participants' availability) and the responsiveness of the sessions (content was discussed based on their needs and interests). Life partners were invited and 65% attended to all sessions.

Conclusions:

The program was a success and we expect to transform it into a peer-led intervention to improve its delivery in the community and its accessibility for rural and remote areas.

Key messages:

- At-risk population-sensitive approaches are key for compliance and effectiveness.
- Group sessions are effective approaches to improve men's mental heatlh literacy.

1.L. Cancer: epidemiology, screening and care

Economic burden of cancer from 2012 to 2017 based on the French national claim database (SNDS)

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Background:

The aim of this study is to assess the economic burden of active cancer in France and to analyze structure and trends of expenditure between 2012 and 2017.

Methods:

Using information about 57 millions of individuals from the general scheme insurance database (86% of the French population) and applying 5 specifically developed medical algorithms (for lung, colon, breast, prostate and other cancers), we identified all people with active cancer. All reimbursed expenditure (hospitalization, ambulatory care, disability/sickness benefits) were extracted for each individual. To analyze trends, we applied the same methodology from 2012 through 2017.

Results:

In 2016 (results for 2017 will be available for the conference), among the 137 billion euros reimbursed by the general assurance scheme, 13 billion (10%) were related to active cancer and 1.2 million people were concerned (2% of the population). About 2.3 billion euros (2%) were related to breast cancer (189,000 people), 1.4 billion euros (1%) for colon cancer (123,000 people), 1.4 billion euros (1%) for lung cancer (77,000 people) and 1 billion (0.8%) for prostate cancer (167,000 people). Hospitalizations represented the main expenditure for colon (71%), lung (61%) and breast cancer (56%). Concerning prostate cancer, hospitalizations stood for 36% while ambulatory care represented 62%. From 2012 to 2016, the expenditure related to active cancer increase by 4.4%/year due to both an increase in patients and in the average annual cost per patient (both +2.2% per year). Focusing on breast cancer, average expenditure increased by 3.2% per year from 10,700€ per year per patient to 12,200€ per year per patient.

Conclusions:

Our study demonstrates the high economic burden of active cancer in France with a detailed analysis of expenditures. The developed tool will help to monitor the burden of these diseases and to implement public health policies.

Key messages:

- Active cancers account for a significant proportion of healthcare expenditure in France.
- Knowing this weight allows designing and implementing public policies adapted to the situation.

Speedy, predictable and secure cancer care? Introducing cancer patient pathways in Norway

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Norway introduced cancer patient pathways (CPPs) in 2015. CPPs are standardised patient pathways, based on current guidelines for cancer diagnostics and treatment. The aim is to speed up patient assessments and start of treatment and minimise waiting times, in order to make the assessment period as predictable as possible. Each CPP are divided into phases, and each phase should be completed within a defined time period. The aim of this paper is to describe and discuss how healthcare professionals work to realise the objectives of the CPPs and how they reflect upon them as tools for achieving predictable and secure cancer care.

The paper departs from an ongoing study (2017-2020) investigating the introduction of CPPs in Norway. The study has a qualitative cross-sectional design and focuses on four CPPs: breast-, prostate, and lung cancer, and malign melanoma. Data are mainly collected through interviews. The study setting is four hospitals, and study participants are hospital staff, including physicians, nurses, clerical workers and managers (N = 60).

Preliminary results show that keeping the waiting times has become a major concern, and national statistics are published showing if the hospitals keep the defined time limits. From the perspective of healthcare workers, CPPs may contribute to a predictable assessment period for patients, and thereby creating a more secure experience. However, predictability and security rest on patients being informed about receiving care organised through a CPP. We found that in many instances this was not the case.

Our study indicates that most effort in hospitals is directed towards reducing waiting times, and we argue that publishing of statistics may be an incentive for hospitals to reorganise their resources and prioritize cancer patients before other (elective) patients. Further development of the CPPs should encourage informing and supporting patients so they can have the most predictable and secure experience as possible.

Key messages:

- Patient pathways is an incentive to reorganise resources to reach defined time limits in cancer diagnostics.
- Short waiting times are positive for patients, even if survival rate is not necessarily affected.

Estimation of the epidemiological impact of the organized screening program for colorectal cancer

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Introduction:

Colorectal cancer (CRC) is the third most common cancer and the second most deadly in France. A CRC national organized screening (OS) program was set up in France in 2009. It targets asymptomatic people aged 50 to 74 year with medium risk of CRC. OS program is based on fecal immunochemical test (FIT) followed by colonoscopy. Participation rate over the last period showed a participation rate of 34%, far from the European standards and the 45% target objective of the French cancer plan.

Methods:

he epidemiological impact of the DO-CCR was estimated from the results of an individual simulation model adapted from the MISCAN-Colon model, calibrated and transposed to the French context. The model simulates the natural history of CRC in a cohort of 5,000,000 individuals from birth to death. The simulated population reproduced the age and sex structure of the French population. Current screening strategy was simulated for the entire population. A first analysis was conducted to estimate the individual impact of screening by sex and by age of screening initiation and cessation. A second analysis was carried out to estimate the global impact of the based on various participation rates.

Results:

FIT every 2 years, from the age of 50, is associated with a reduction in the CRC incidence of 21% for women and 24% for men and a reduction in CRC mortality of 43% for women and 51% for men. At the current level of participation, the OS reduces incidence by 5% and mortality by 14% (2,200 CCR and 2,600 deaths per year) compared to no OS. The impact would be reduced by an additional 3% and 8% for participation rates of 45% and 65% respectively, a decrease of 1,300 and 3,500 cases per additional year. Similarly, mortality would decrease by an additional 8% and 22% for participation rates of 45% and 65%, respectively additional decreases of 1,400 and 4,000 deaths per year.

Key messages:

- These results confirm that in a population at medium risk for CRC, the OS is an effective strategy for reducing incidence of CRC.
- Increasing participation rate to reach the Cancer Plan's objectives remains a key issue in France.

Quantifying the impact of adherence to screening on colorectal cancer incidence and mortality

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Background:

Current recommendations of The US Preventive Services Task Force (USPSTF) on colorectal cancer (CRC) screening strategies are based on models that assume 100% adherence to screening. Since adherence can largely affect the outcomes of a screening modality, we aimed to assess the comparative effectiveness of CRC screening strategies under published rates of actual adherence.

Methods:

We developed an individual-level simulation model and validated it against landmark trials and USPSTF models. Then we assessed the effectiveness of colonoscopy (COL), flexible sigmoidoscopy (FS), high-sensitivity guaiac fecal occult blood test (HS-gFOBT), fecal immunochemical test (FIT), multitarget stool DNA test (FIT-DNA), computed tomography colonography (CTC), and methylated SEPT9 DNA test (SEPT9) in reducing CRC incidence and mortality. For each strategy, we also estimated the incremental life-years gained, number of colonoscopies, and adverse events.

Results:

Assuming 100% adherence, FIT-DNA, FIT, HS-gFOBT, and SEPT9 averted 58 to 59 CRC cases and 28 CRC deaths; COL and CTC strategies 56 cases and 27 deaths, while FS averted 39 cases and 19 deaths per 1,000 individuals. Life-years gained were similar across FIT-DNA, FIT, HS-gFOBT, SEPT9, CTC, and COL strategies. The total number of colonoscopies was highest with COL (3,567), followed by SEPT9 (3,231), HS-gFOBT (2,584), FIT-DNA (2,079), FIT (2,067), CTC (1,691) and FS (1,538) strategies. Assuming actual adherence, SEPT9 averted 54 CRC cases and 26 CRC deaths, followed by COL with 49 cases and 24 deaths, and FIT-DNA, FIT, CTC and HS-gFOBT with approximately 36 to 41 cases and 18 to 21 deaths averted per 1000 individuals screened. Life-years gained reflected the effectiveness of each strategy in reducing CRC cases and deaths.

Conclusions:

Adherence is a key factor in determining the effectiveness of CRC screening and strategies with higher expected adherence rates have the potential to reduce cancer incidence and mortality.

Key messages:

- Adherence has a substantial impact on screening outcomes, such as cancer incidence and mortality, and may influence selection of optimal screening strategies.
- Strategies with higher expected adherence rates can lead to clinically meaningful benefits compared to strategies that may have better one-time sensitivity and/or specificity.

Barriers and facilitators on cervical cancer screening among HIV women in Cote d'Ivoire

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Background:

With 50,000 death every year, cervical cancer is the fourth most common cause of death by cancer in sub-Saharan countries. Due to high risk human papilloma virus (hr-HPV) persistence on the cervix, leading to pre-malignous lesions, the disease is more frequent among HIV-positive women. In low- and middle-income countries, cervical cancer screening strategy relies on visual inspection with acetic acid, an operator-associated technic. As an alternative, HPV-based detection and its better performances are considered as it could lead to a potential screening uptake and women empowerment through self-sampling. Côte d'Ivoire, with a high HIV prevalence, is considering this innovative strategy. Yet, few studies analyzed the potential socio-cultural factors associated with cervical cancer screening in this context. Our study aims to assess beliefs and perceptions toward cervical cancer among HIV positive women in Abidjan, Côte d'Ivoire.

Methods:

We performed in-depth interviews with 21 HIV positive women randomly attending a health center or member of a women's association, in November 2018. All interviews were recorded and transcribed. A theoretical framework with the Health Belief Model and the PEN-3 was used to categorize women's perceptions, enablers, nurturers, perceived gravity and self-efficacy about cervical cancer, screening and self-sampling technique introduction.

Results:

Positive findings were knowledge about cervical cancer, awareness about women's vulnerability and HIV status role on it and relationship to caregivers. Fear appeared as a barrier to screening but also a facilitator among women with health awareness. Negative findings were reluctance for HIV-associated diseases, poor screening knowledge and lack of resources to get treated. Self-sampling introduction was disregarded due to lack of self-confidence.

Conclusions:

This study provides useful information for counselling and opens the door to HPV-based screening implementation.

Key messages:

- Beliefs and perceptions about cervical cancer screening among HIV women need to be assess before implementing a new strategy.
- Cervical cancer screening uptake will need to address fear, self-confidence and stigma.

Employment two years after breast cancer diagnosis: role of household characteristics, CANTO cohort

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Background:

Breast cancer is associated with a high 5-year survival rate and more than half women are still of working age at diagnosis. Many studies evaluated the clinical determinants of return to work (RTW) but few investigated RTW in relation to family factors. Our objective was to study the role of household characteristics in non-RTW two years after breast cancerdiagnosis.

Methods:

We used data of a French prospective cohort of women diagnosed with stage I-III, primary breast cancer (CANTO, NCT01993498). Patients had to be under 57 and have a job at diagnosis. We performed logistic regressions to model non-RTW two years after diagnosis in relation to household characteristics at diagnosis (marital status, children, support from partner), adjusting for tumor characteristics, health status at baseline and one year after diagnosis, and household income at diagnosis. In a second step, we conducted analyses stratified for household income at diagnosis.

Results:

In total, 1874 women were eligible. Being in a relationship did not impact non-RTW (OR = 1.43 [95% CI 0.95-2.16]). Among the 1566 women in a relationship, being married was associated with elevated odds of non-RTW(OR = 1.37 [0.96-1.94]). Having children(OR = 1.17 [0.81-1.69]) or receiving support from their partner (OR = 1.17 [0.77-1.78]) was not associated with non-RTW. However, the situation differed in low-income households(<2500€) among whom being married was associated with more elevated odds of non-RTW(OR = 1.94 [0.97-3.88]). No clear association was observed between having children (OR = 1.85 [0.85-4.03]) and non-RTW, but living with at least two children (OR = 2.76 [1.14-6.70]) and receiving support from their partner (OR = 2.28 [1.01-5.17]) was associated with increased odds of non-RTW.

Conclusions:

The family environment is associated with non-RTW among the poorest women but not the others.

Key messages:

- Among the poorest women, the family environment is associated with non-RTW.
- Among all women, the family environment is not associated with non-RTW.

The effect of breast cancer on work participation in different sectors. A Danish registry based study

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Background:

A breast cancer diagnosis affects an individual's affiliation to the labor market, but whether the effect of breast cancer variates in different sectors in a Danish setting has not been examined. The present study investigated the effect of stage IA breast cancer (tumor<20 mm and no lymph nodes involved in six sectors among Danish women being part of the work force. Stage IA breast cancer has a good prognosis, and it would be assumed that the majority have returned to work after 1 year.

Methods:

This registry-based cohort study was based on data from linked Danish nationwide registries. We identified 5,543 women (aged 25-63 years) diagnosed with breast cancer (BC) stage IA (exposed) and 65.889 women without breast cancer (unexposed) and included women from the different sectors. We calculated a yearly Work Participation Score (WPS), defined as the proportion of weeks being self-supported during a year. We compared the means of WPS for exposed and unexposed women in six different sectors: 1) teaching, 2) childcare, 3) eldercare, 4) cleaning, 5) administration and 6) hospitality industry.

Results:

BC had a negative effect on being self-supporting for women in all six sectors in all three years, although the effect declined. In the first year, the difference in WPS varied between 0.38 and 0.54. During the second year all BC patients had still significantly lower WPS with the largest difference in hospitality industry (0.65 (95% CI 0.50-0.80) for exposed women and 0.86 (95% CI 0.83-0.88) for unexposed women). In the third year, the effect further declined although WPS was still significantly lower for most sectors with the biggest difference in the cleaning sector.

Conclusions:

A stage IA BC diagnosis had a negative effect on being self-supportive after 2 and 3 years among women in all six sectors, although the difference was largest among cleaning workers. This may indicate, that individual follow-up in relation to work participation is necessary.

Key messages:

- Although breast cancer stage IA has a good prognosis, it still affects being self-supporting after three years.
- A diagnosis of breast cancer affects the affiliation to the labour market, but the effect differs according to different sectors.

Socio-economic position across the lifecourse and risk of breast cancer: findings from EPIC-Italy

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Backgrounds:

Socio-economic position (SEP) is linked to many health outcomes but the link between SEP and breast cancer (BC) is complex. This study explores the relationship between SEP from early life and future risk of BC.

Methods:

We used data from the Italian component of the European prospective investigation into cancer and nutrition: EPIC-Italy (up to 26,391 women). Cox proportional hazard models were used to estimate the association between measures of life course SEP (father's occupation, educational level, highest household occupation) with risk of BC, adjusting for health behaviours (smoking, alcohol, physical activity, Mediterranean diet), height, weight and reproductive factors (postmenopausal status, age at first full term pregnancy). To mimic life course experiences, we analysed the relationship between father's occupation and risk of BC, sequentially adjusting for SEP in young adulthood and adulthood, as well as the impact of social mobility.

Results:

We observed a significant association between father's occupation and risk of BC, where participant with low SEP had lower risk to develop BC (HR[95%CI] = 0.88[0.78; 0.99]). This association was borderline significant when we analysed educational level and highest household occupation. These associations were only slightly modified after adjustment for health behaviours, height and weight but more strongly affected by reproductive factors. However, the association between father's occupation and BC remained borderline significant in the fully adjusted model (HR[95%CI] = 0.91[0.80; 1.03]). Stable low trajectory showed a lower risk of BC (HR[95%CI] = 0.82[0.71; 0.96]) slightly attenuated after adjusted for reproductive factors (HR[95%CI] = 0.88 [0.75; 1.03]).

Conclusions:

Our findings suggest that low early-life SEP and stable low trajectory are associated with a lower risk of BC, which is partly explained by reproductive factors.

Key messages:

- Low early life socioeconomic position and stable low trajectory are associated with a lower risk of BC.
- Reproductive factors, especially age at the first full term pregnancy, explain part of these associations.

1.M. Globalisation, dietary evolution and health

Ultra-processed food intake and cardiovascular disease risk in the NutriNet-Santé prospective cohort

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Objective:

To assess the prospective associations between consumption of ultra-processed foods (UPF) and the risk of cardiovascular diseases.

Methods:

105159 participants aged at least 18 years (median age 41.5 years) from the French NutriNet-Santé cohort (2009-2018) were included. Dietary intakes were collected using repeated 24 hour dietary records, designed to register participants' usual consumption for 3300 different food items, and categorized according to their degree of processing by the NOVA classification. Associations between UPF intake and risk of cardiovascular, coronary heart, and cerebrovascular diseases assessed by multivariable Cox proportional hazard models, adjusted for known risk factors.

Results:

UPF intake was associated with higher cardiovascular disease risk (n = 1409 cases; HR for an absolute increment of 10 in the percentage of UPF = 1.12(1.05-1.20); P = 0.0008), coronary heart disease risk (n = 665 cases; HR = 1.13(1.02-1.24); P = 0.02), and cerebrovascular disease risk (n = 829 cases; HR = 1.11(1.01-1.22); P = 0.02). These results remained statistically significant after adjustment for several markers of the nutritional quality of the diet (saturated fatty acids, sodium and sugar intakes, dietary fiber or a Healthy pattern derived by principal component analysis) and after a large range of sensitivity analyses.

Conclusions:

In this large observational prospective study, higher consumption of UPF was associated with higher risks of cardiovascular, coronary heart, and cerebrovascular diseases. These results need to be confirmed in other populations and settings, and causality remains to be established.

Key messages:

- The consumption of ultra-processed food is associated with an increased risk of cardiovascular diseases. As the French Public Helath agency recommends, their consumption should be limited.
- Nutritional composition, food additives, contact materials, or neoformed contaminants might play a role in these

associations and further studies are needed to understand their relative contribution.

Traditional Eastern European diet and its relationship with mortality: results from the HAPIEE study

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Background:

Cardiovascular disease (CVD) and cancer mortality rates in Eastern European countries are among the highest in the world. Although unhealthy diet is an important risk factor for both of these chronic diseases, traditional eating habits and their health effects in this region have not yet been explored. This analysis assessed the relationship between traditional dietary pattern and mortality from all-causes, CVD and cancer in Eastern European population-based cohorts.

Methods:

We used data from the Health, Alcohol and Psychosocial factors in Eastern Europe (HAPIEE) multi-centre prospective cohort study based in Russia, Poland and the Czech Republic (age range at baseline: 45-70 years). Diet was assessed by food frequency questionnaire, and we constructed an Eastern European diet score (EEDS) from nine food groups considered as ‘‘traditional’’ in this region. The relationship between EEDS and all-cause, CVD and cancer mortality was calculated with Cox-regression models.

Results:

From the 18,852 participants, 2,234 died during the average follow-up of 11.7 years. In multivariable adjusted models, participants with high adherence to the traditional Eastern European diet had significantly higher risk of all-cause (HR 1.20; 95% CI 1.05-1.38) and CVD deaths (1.32; 1.05-1.64) compared to those with low adherence. The association with cancer mortality was not significant (1.12; 0.90-1.40). From the specific EEDS components, high consumption of lard was significantly positively related to all three mortality outcomes, while processed fruit or vegetable consumption showed consistent inverse associations.

Conclusions:

Our results suggest that traditional eating habits may contribute to the poor health status, particularly the high CVD mortality rates, of populations in Eastern Europe. Adequate public health nutritional interventions in this region are essential.

Key messages:

- This work indicates that traditional dietary habits in Eastern European countries may be one of the reasons for the poor health status of populations in this region.
- Public health nutritional interventions which target traditional but unhealthy foods, such as lard, have the potential to considerably improve population health in Eastern Europe.

Mediterranean diet and risk of first hospitalization for heart failure and atrial fibrillation

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Background:

We aimed to explore the association of a traditional Mediterranean diet (MD) with risk of first hospitalization for heart failure (HF) or atrial fibrillation (AF) in a population-based cohort from a southern Italian region.

Methods:

Longitudinal analysis on 20,598 men and women (aged$\geq$35 y) free from HF, AF and cardiovascular disease recruited in the Moli-sani Study (2005-2010). First hospital admissions for HF or AF were recorded by direct linkage with hospital discharge form registry. Dietary data were collected by the EPIC food frequency questionnaire, adherence to MD was appraised by the Greek Mediterranean diet score (MDS ranging 0-9). Hazard ratios (HR) with 95% confidence interval (95%CI) were calculated by multivariable Cox-regression.

Results:

Over a median follow up of 8.2 y, we ascertained 661 HF events and 337 AF cases. A 2-point increase in the MDS was associated with a downward trend in the risk of developing HF (HR = 0.94;0.85-1.04) after adjustment for potential confounders, while no association was found with risk of AF (HR = 1.07;0.94-1.21). Analyses run separately by gender revealed that higher adherence to an MD was associated with lower risk of HF among women (HF = 0.83;0.72-0.95 for 2-point increase in the MDS) but not in men (HR = 1.07;0.93-1.22; p for interaction = 0.011). No gender-related difference was observed for AF risk (p for interaction = 0.62). Among women, higher intake of monounsaturated over saturated fats was associated with 38% (20% to 52%) lower risk of HF, while in men moderate alcohol intake was likely to reduce HF risk (HR = 0.87;0.70-1.08).

Conclusions:

Closer adherence to a traditional MD is associated with lower risk of first hospitalization for HF among women but not in men. No association was found with risk of AF.

Key messages:

- A traditional MD reduces the risk of HF in women but not in men.
- Minor dietary changes inspired to a traditional MD could be valuable primary prevention measures for risk of HF.

Association between fast-food outlet exposure and Body Mass Index in 124,286 Lifelines participants

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Background:

Elevated Body Mass Index (BMI) is a key risk factor for numerous non-communicable diseases, such as cardiovascular diseases, cancer, diabetes type II and dementia. Previous studies showed associations between fast-food outlet exposure and BMI, but contained methodological shortcomings. Particularly within the Netherlands, evidence is scarce. We aimed to examine the association between fast-food outlet exposure and BMI among the Dutch adult general population, and whether this association was mediated by daily caloric intake.

Methods:

Cross-sectionally linking baseline adult data (N = 124,286) from the Lifelines cohort to fast-food outlet location (LISA: employer register) data, we regressed fast-food outlet density (within distances of 500 metre(m), and 1, 3, and 5 kilometre (km)) and fast-food outlet proximity around participants' residential address on BMI. We used multilevel regression and multilevel mediation models, adjusting for age, sex, partner status, education, employment, neighbourhood deprivation and neighbourhood address density. We stratified analyses for urban and rural areas, as these involve different living environments and study populations.

Results:

More than half (56%) of participants was overweight (BMI $\geq$ 25.0). The average BMI in urban and rural areas was 25.9 (SD 4.4) and 26.3 (SD 4.3), respectively. In rural areas, having at least three fast-food outlets within 500 m was associated with higher BMI (B = 0.17, 95% confidence interval (CI): 0.06, 0.28). In urban areas, having at least five fast-food outlets within 1 km was associated with higher BMI (B = 0.42, 95% CI: 0.20, 0.63). Having the nearest fast-food outlet within 100m was associated with higher BMI (B = 0.43, 95% CI: 0.19, 0.67). The associations were partly explained by daily caloric intake.

Conclusions:

Fast-food outlet exposure may be an important environmental determinant of BMI. Policy-makers should consider intervening upon the fast-food environment.

Key messages:

- Fast-food outlets within 500 metres in rural areas and 1 kilometre in urban areas may play a fundamental role in the rise of BMI.
- Targeting fast-food outlets may be key to reduce BMI on a population level.

1.N. Health literacy

Evaluation of Education for Public Health: A Practical Foundation for Solidarity

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Education is a key to creating solidary among the professionals who advance public health's interdisciplinary mission. Our assumption is that if all those who work in public health shared core knowledge and the skills for interdisciplinary interaction, collaboration across disciplines, venues, and countries would be facilitated. Evaluation of education is an essential element of pedagogy to ensure quality and consistency across boundaries, as articulated by the UNESCO education standards. Our study examined the evaluation studies done by programs that educate public health professionals.

We searched the peer reviewed literature published in English between 2000-2017 pertaining to the education of the public health workforce at a degree-granting level. The 2442 articles found covered ten health professions disciplines and had lead authors representing all continents.

Only 86 articles focused on evaluation. The majority of the papers examined either a single course, a discipline-specific curriculum or a teaching method. No consistent methodologies could be discerned. Methods ranged from sophisticated regression analyses and trends tracked over time to descriptions of focus groups and interviews of small samples. We found that evaluations were primarily discipline-specific, lacked rigorous methodology in many instances, and that relatively few examined competencies or career expectations.

The public health workforce enjoys a diversity of disciplines but must be able to come together to share diverse knowledge and skills. Evaluation is critical to achieving a workforce that is well trained in the competencies pertinent to collaboration. This study informs the pedagogical challenges that must be confronted going forward, starting with a commitment to shared core competencies and to consistent and rigorous evaluation of the education related to training public health professionals.

Key messages:

- Rigorous evaluation is not sufficiently used to enhance the quality of public health education.
- More frequent use of rigorous evaluation in public health education would enhance the quality of public health workforce, and enable cross-disciplinary and international collaboration for solidarity.

We're making individuals more ''health literate'' but what about communities?

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Health literacy (HL) is increasingly hailed as a strategy to improve the control individuals have over their health. So much so that HL is now ranked as a determinant of population health. A central critic of HL intervention is its over emphasis on individual level factors something recognised in the 2008 report of the Commission of Social Determinants of Health (SDoH) that recommended expanding the scope of HL to cover the SDoH.

Our objective of our study was to assess the extent to which recent progress on HL captures the need for collective action on the SDoH.

We conducted a scoping review on PubMed looking for review papers, published between 2013-2018 in English and French. The reference lists of the papers were also searched to find other relevant articles. The WHO website was also consulted. The most cited definitions were analysed against two main dimensions (i.e. locus of change of HL strategies and foreseen outcome of HL improvements).

We identified 419 articles. Despite a number of authors calling for more research on HL interventions at the community level and an expansion of the definition to cover the SDoH, we found that the recommendation of the Commission has yet to be implemented. Even when the definitions include the capacities of individuals on distal determinants, both the locus of change and outcomes of HL improvement stayed focused on intra individual factors. It is noteworthy that communities were either framed as a setting outside of health care services or as an aggregate of individuals. We found no instance of HL intervention regarding communities as complex systems of actors sharing a common space and dynamic.

We conclude by drawing attention on the research gap in addressing the upstream SDoH through HL actions. We propose some elements of definition of HL reflecting the need for interventions to build capacities for collective action on the SDoH and develop measurements at the community level.

Key messages:

- Research and practice have yet to embrace the contribution of HL in addressing the upstream SDoH.
- There is a large research gap on how HL can build collective capacities on addressing the SDoH.

Building bridges takes time: Views of healthcare professionals on health literacy and migration

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Background:

Health literacy is an output of individual resources and capabilities, situational factors, environmental conditions, and the requirements of the health care system. As migration continues to increase globally, successful interaction between healthcare professionals and migrants can be important for a sustainable and resource-oriented promotion of health literacy. This study aims to explore challenges, needs and applied solutions of healthcare professionals in the interaction with migrants in Germany.

Methods:

Five focus group discussions were conducted in Cologne, Germany. Participants were healthcare professionals (n = 30), including general practitioners, medical specialists in inpatient and outpatient care, and nurses. Discussions were audio recorded, transcribed verbatim and analysed by qualitative content analysis.

Preliminary results:

Participants reported a lack of time and general uncertainty in dealing with the health literacy-related needs of the target population. Assumptions on discrimination through the health system and restrictive gender roles on the patients' side were additional key challenges for a successful interaction. To bridge these barriers, some participants reported to invest time even beyond systemic conditions; most wished for professional interpreters or cultural mediators. Participants who themselves were migrants found this helpful for communicating information to patients and improving patients' confidence in the recommended treatment. Using clinical staff as lay interpreters outside their own treatment situation was rated critical, as it can be associated with a considerable burden due to a further time restriction for their actual tasks.

Conclusions:

Preliminary findings reveal that general problems in the health care setting (e.g. time pressure, ensuring patients' compliance) can occur more intensively in migrant patients. Health professionals require support through the provision of state-funded professional interpreters.

Key messages:

- Health literacy related challenges become more visible in the context of migration and reveal general issues in the German health system that need to be solved for the benefit of the entire population.
- Research on health literacy in the context of migration is important in order to ensure the promotion and maintenance of health equally and effectively across populations.

Potentials of school nursing for strengthening health literacy: a 2017/18 German longitudinal survey

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Background:

Health literacy (HL) plays a key role in explaining health disparities. School nurses provide health related expert knowledge and skills within the school setting. A positive effect on the HL of children but also their teachers and parents is assumed and supported by some research but gaps persist in the available data.

Methods:

As part of a pilot school nursing project, which placed school nurses in 28 public schools in two German states, all teachers, parents and students (11+ years) attending the schools were invited to participate in a 2017 baseline (T0) and 2018 follow-up (T1) survey. Adult HL was measured using the HLS-EU-Q16 and child HL with the HLSAC. Bi- and multivariate analyses were carried out.

Results:

Comparing T0 and T1, HL scores improved in all populations. In East Germany (Brandenburg), the percentage of teachers with problematic or inadequate HL decreased from 56.6 (N = 173) to 51.5 (N = 173) and among parents from 45.7 (N = 1719) to 43.2 (N = 1080). In West Germany (Hessen), the percentage of teachers with problematic or inadequate HL also decreased, from 43.7 (N = 201) to 42.2 (N = 263), and among parents from 42.2 (N = 2013) to 34.9 (N = 1251). The percentage of children that scored in the moderate or high HL brackets increased from 77.9 (N = 898) to 82.2 (N = 736) in Brandenburg and from 84.9 (N = 1379) to 86.5 (N = 1487) in Hessen. There were strong statistical relationships between child/parental HL and child health behaviors in all datasets. The T0 and T1 comparison showed some improvements over time.

The presence of school nurses in public schools seemed to increase health awareness, thus contributing to a ''healthy school.'' After a short period (18 months) and despite a rather nonspecific spectrum of interventions, the HL of all relevant target groups improved. Further research is needed to quantify the relative contribution of the school nurses to improvements in HL, for example, by implementing a HL curriculum in a controlled setting.

Key messages:

- The presence of a school nurse seemed to increase health awareness contributing to a ''healthy school.''
- After 18 months of intervention, the health literacy of children, parents and teachers improved.

Social gradient in health literacy among primary healthcare users in Cyprus

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Background:

Health literacy (HL) is a critical determinant of health and citizens' control over their health. The European Health Literary consortium developed a conceptual model and related HLS-EU-Q47 tool of four cognitive and three health domains and showed high levels of inadequate HL in eight European countries.

Methods:

This methodological and descriptive study evaluated the metric properties of the tool in a new setting and assessed HL among a Greek-Cypriot population. Differences in HL by social position and health behaviours was assessed.

Results:

A sample of 300 adults from a General Hospital participated, 65%:35% urban vs rural, 15.3% divorced/widowed, 33% tertiary education, as expected according to census. 53% rated their health as ''less than good'', 45.6% were current or past smokers and mean BMI was 26.8 (SD 5.2). Cronbach's alpha coefficient for internal consistency was >0.80 for cognitive (access, understand, appraise, and apply) and health sub-scales (healthcare, prevention, health promotion). A three factor structure explaining 52.1% of the variance was identified in exploratory factor analysis (''access to information'', ''prevention and promotion-related literacy'' and ''user-provider interaction''). Half of the participants (50.7%) reported inadequate or problematic HL with statistically lower HL in older age-groups but no difference by urban: rural status. A clear social gradient was observed by education, income and subjective social position on a 10-step ladder. Regular alcohol consumption and low physical exercise were related with low HL, but not smoking or BMI.

Conclusions:

HLS-EU-Q47 showed good metric properties in a new language and setting. The proportion of population with inadequate or problematic HL appears high but consistent with findings from other European populations. The observed social gradient in HL supports the criterion known-group validity of the tool as well as highlights an important aspect of health inequality.

Key messages:

- There is support for HLS-EU-Q47 as a valid and reliable measure of health literacy.
- A high proportion of the Cypriot population with problematic health literacy with a clear social gradient.

Association between occupational situation and health literacy: A Danish population-based survey

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Background:

It is well known, that health literacy is associated with health, and that occupation and health is associated as well. But current knowledge on the relationship between occupation and health literacy is scarce. The aim of this study was to examine the association of occupation with health literacy.

Methods:

Between 2016 and 2017 a random sample of the Danish population participated in a cross-sectional national representative survey using the short version of the European Health Literacy Survey Questionnaire. 15,682 adults aged 25 years or older was invited, and 8,997 residents participated. Data on occupational situation were obtained from nationwide administrative registries, which contains information on employment and public benefits. Logistic regression was conducted for the binary outcome of health literacy and the exposure variable of occupational situation. Model was adjusted for sex, age, immigration, education, cohabitation and income. Subsequently, a mediation analysis was conducted to analyze if health literacy was a causal pathway in the association between occupational situation and health.

Results:

Respondents receiving unemployment benefits had a significantly higher risk of inadequate health literacy [OR = 1.66 ($p < 0.001$)] compared to respondents who were employed. The associations were also significant for social assistance [OR = 1.63 ($p < 0.001$)], employment and support allowance [OR = 1.59 ($p < 0.001$)], and sickness benefit [OR = 1.55 ($p < 0.001$)]. Mediation analysis showed, that the association between employment status and health were partly mediated by health literacy.

Conclusions:

Results are important to understand the health disparities in connection to occupational situation, health literacy, and health. As a mean for health promotion, interventions to improve health literacy should be planned for groups receiving public benefits and when health information is delivered for these groups the level of health literacy should be considered.

Key messages:

- Association between employment status and health were partly mediated by health literacy.
- Interventions to improve health literacy should be planned for groups receiving public benefits.

Digital health literacy of health care profession students

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Background:

Digital transformation in health and health systems is a chance and a challenge for health professionals irrespective of their field. To maximize the benefit for patients high digital health literacy is required. A requirement not represented in health professions' curricula in Switzerland. Little is known on the digital health competencies of students, on their utilization and views of digital media in the context of health, thus a cross-sectional survey was performed at a School of Health Professsions in Switzerland.

Methods:

All BSc. students (N = 1200; nursing, midwifery, occupational health, physiotherapy and health promotion) received an online questionnaire covering utilization of various information resources, views on digital health & media and the German eHealth Literacy Scale (eHEALS, score 0 - 40). Descriptive and group analyses were performed, further adjusted analyses will be run.

Results:

453 students responded (female N = 368, male N = 26). Participation was 38% and highest in 1st students. Personal health information resources used most were: internet 82%, familiy&friends 70%, health professionals 66%, textbooks 40%. A majority rated digital media as important (66%) or rather important (30%) for their future professional activities. The overall eHeals-score was 28.6 (sd 4.93); critical evaluation and confidence in applying information scored lowest. Preliminary group analyses show significant increase by study year (1st 28.0, 2nd 28.9, 3rd 29.7, p = 0.01), while scores by gender or health profession were non-significantly different.

Conclusions:

Almost all students in health professions use digital media for their own health information needs and consider digital media as highly relevant for their future career. Critical evaluation skills need to be strenghtend. Digital Health Literacy is only slightly higher in 3rd year students. Longitudinal data are needed to differentiate cohort from learning effects.

Key messages:

- Digital media are increasingly important in health systems, a view shared by future health professionals. Data indicate only a small increase of digital health literacy across three years of study.
- Curricula should include digital health competencies to ensure a highly digitally skilled health work force.

Information seeking and knowledge on in-home care services in a representative sample in Switzerland

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Background:

In Switzerland the use of in-home care services has increased steadily in recent years. Contributing to this trend are a growing aging population and changing family structures. In-home care services are embedded in complex financing systems, which require considerable efforts and capacities to navigate, and if not well understood, can lead to inefficient usage of healthcare services. The aim of this study is to assess information seeking behavior and knowledge on in-home care services in the Swiss general population.

Methods:

Data comes from a cross-sectional online survey, using a representative sample from Switzerland (N = 1050), conducted in September 2018. The survey included items on information seeking behavior (sources, difficulties seeking information), as well as general and financial knowledge on in-home care services.

Results:

50.1% had sought information on in-home care services at least once. Logistic regression shows that age (β = .01, p<.005) and gender are significant predictors for information seeking, with women being more likely to have sought information (β = .26, p<.05). Those with highest education are less likely to have sought information (β = -.55, p<.05). About 1/4 of participants indicate having had some difficulty when seeking information, including being worried about the quality of information. 84.8% indicate to have at least some knowledge about in-home care financing. Whereas the majority is relatively well informed on the financing of in-home care services, such as ‘‘acute and transitional care’’, participants have overall relatively little knowledge on additional financing mechanisms, such as supplemental benefits. Multiple regression shows that age significantly predicts financial knowledge (β = .04, p<.001).

Conclusions:

The study shows that knowledge gaps exist, which may hinder effective and efficient use of in-home care services, as well as a potential lack of available and clear information to make appropriate decisions on services.

Key messages:

- Important knowledge gaps on in-home care services exist in Switzerland.
- The study indicates a potential lack of available and easy-to-understand information on in-home care services in Switzerland.

1.O. Workshop: Building bridges between environmental and Public Mental health

Organised by: EUPHA (PMH), EUPHA (ENV)
Chair persons: Jutta Lindert - EUPHA (PMH), Marija Jevtic - EUPHA (ENV)
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Scope and extent as well as duration of mental health and mental disorders are influenced by various factors, such as environmental factors. Environmental factors relate to physical, chemical and built environment. We aim to build knowledge by providing 1) a case study on perception of climate change and possibilities and limitations of adaptation, 2) a review on mental and neuropsychiatric disorders in the light of the SDGs framework and 3) give an overview of research methods both, in environmental epidemiology and in neuropsychiatric epidemiology. By bringing together the two fields of expertise and the members of the section of Environment and Health and of Public Mental health we will not only build bridges between individuals but between disciplines which might lead to a joint research agenda.

Key messages:

- The scope of mental health changes with changes in the environment.
- Knowledge provides a strong bridge to link the environment with mental disorders.

Prevention of mental health effects by climate change and environmental drivers

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Background:

There is a growing amount of climate change and health data available in open sources. Inhabitants value their neighbourhood mostly by perception. Local authorities make spatial planning discussions based on environmental data. In the case of heat waves more climate adaptation measures are taken by authorities. However, there is a gap in knowledge on the need for adaptation of our environment and the perception of a growing proportion of the population on the need for adaptation. Furthermore, there is little focus on the mental problems related to climate change. The example of heat wave adaptation has been studied.

Methods:

Heat wave plans across Europe have been analysed on participatory processes by the population or by broader group of stakeholders in the health care sector. The existing plans of 20 countries were collected. Interviews with key-persons involved in the implementation of these plans were used. The perception of the population on the measures, the mentioning of individual or group resilience and for mental disturbances during or in the aftermath of a heat wave were studied.

Results:

The results show limited attention for the participatory process in heat wave plans. There is no attention for mental problems. Resilience is only addressed the way that simple message is conveyed through the media. There is limited focus on vulnerable groups in society.

Conclusions:

It would help if the local authorities would make decisions in adaptation of their spatial planning to include the perception of the population and to focus on some vulnerable groups in society. The extension of caring about vulnerable groups beyond the period of heat waves is needed.

Environmental Challenges as Mental Health risks and oppotunities in the light of SDGs

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Background:

Environmental risk factors such as air pollution, contaminated water, climate change, soil pollution, chemical exposures, ultraviolet radiation, noise pollution and others potentially contribute to diseases and mental disorders, such as depressive and anxiety disorders. Taken together mental, behavioral and neurological disorders accounted for 10% of the global disease burden in 2015 and is expected to increase to 15% by the year 2020.

Methods:

We will identify health promoting factors on the background of the changing disorders spectrum. Based on a narrative review we identified as potentially environmental mental health promoting factors quality green areas, e urban planning, sanitation and public transportation, and decrease in noise pollution.

Results:

Using the sustainable development goals (SDGs) as a benchmarking tool in national, regional and local development plans, citizens are empowered to improve their mental health through improved environment. Discussion: Mental health is an underresearched area in the field of environmental health. Intersectoral and interdsiciplinary collaboration can contribute to overcome boudnaries of specific disciplines and build bridges to support the overall goal of promoting and supporting mnetal health and reducing the burden of mental and neurological disorders.

Environment and mental health – developing a research agenda

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Background:

Environmental research and research on mental and neurological disorders remains largely separated. Research methods in both fields are different using diverse approaches. Aim of this talk is to highlight differences and commonalities in research methods in the fields of environmental and neuropsychiatric epidemiology.

Methods:

A scoping review of methods was preformed using databases such as PUBMED, ISI Web of Science, Embase, CINHAL and PSYCHINFO.

Results:

The search yielded several hundred citations. The search will be updated in July 2019 to provide the most recent results in the workshop. So far the review suggests that the fields of environmental epidemiology and neuropsychiatric epidemiology still are separated. Discussion: Approaches to build a joint research agenda will be discussed. Some methods which are used in both subdisciplines of epidemiology will be described in detail in the workshop. Likewise, challenges in collaboration will be discussed with the audience. This discussion with workshop participants is a possibility to learn from each other and build interdisciplinary bridges.

1.P. Understanding the evidence and novel approaches to health

''Brave men'' and ''emotional women'': A literature review on gendered norms towards patients with pain

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Background:

More women than men report chronic pain but despite the large body of research on sex differences there is a lack of knowledge on the influence of social and cultural gender. As gender norms can lead to gender bias in health care it is important to raise awareness about them. The purpose of this study was to illustrate gendered norms about men and women with chronic pain in scientific journals, and to analyze how societal norms are reproduced in health care.

Methods:

A literature search of the databases PsycINFO, CINAHL and PubMed was conducted, January 2000 to April 2015, with the search term chronic pain combined with femininity, masculinity, gender bias, gender stereotypes and gender roles. A total of 77 articles met the inclusion criteria and were analyzed qualitatively. The integrative approach enabled a review of articles from both social and medical sciences, and to include qualitative and quantitative research. The material was sorted into theoretical categories and further coded into substantive categories.

Results:

The included articles showed a variety of gendered norms about men's and women's experience and expression of pain, their identity, lifestyle and coping style. Women were described as emotional and hysterical, constantly dealing with mistrust from health care. Men were pictured as brave, stoic and struggling with their sense of masculinity. Prevailing societal norms are consolidated in health care, positioning the masculine man as the ideal patient.

Conclusions:

Gender stereotypes are reproduced in healthcare, which can lead to gender bias in the treatment of patients with pain. The findings were used to develop a tool, ''the pain cube'', aimed to improve health care providers' consciousness about gendered norms.

Key messages:

- Men and women with chronic pain are depicted in a stereotypical way in scientific articles.
- Increased awareness about gendered norms can support health care professionals in providing equitable care.

The association between screen time and psychological distress in Norwegian adolescents

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Background:

The use of screens, especially mobile devices like tablets and smartphones have increased over the last years, and have become an integrated part of modern life. Adolescents today spend a lot of their time using screens both at school and outside school. The concerns about the impact of screens on adolescents are growing, and some expert groups have suggested controlling screen time for children and young adults. Because research is limited and screen-based utilization technologies and their patterns are changing rapidly, it is important to examine their impacts on mental health. This can help to guide public health policy on consequences of, and potential limits on screen time. The purpose of this study is to study the association between screen time and psychological distress among adolescents.

Methods:

This study is based on self-reported cross-sectional data from the Ungdata survey conducted in 2018. The target group comprised 6777 adolescents from secondary schools in Norway. Ten items on depression and anxiety symptoms were used to create a composite measure of psychological distress. Binomial logistic regression was used to analyse the association between screen time and psychological distress.

Results:

Preliminary results showed that the odds for psychological distress were higher for those who used screens more than 2 hours per day after school (OR: 1.83, 95% CI: 1.60-2.09), compared to those who used screens 2 hours and less per day. Further, the odds of having psychological distress were higher in girls compared to boys (OR: 3.49, 95% CI: 3.14-3.87), and in upper secondary school compared to lower secondary school (OR: 1.41, 95% CI: 1.25-1.58).

Conclusions:

Two hours or more used on screens per day was associated with significantly higher odds for psychological distress. Hence, public health policy and practice should pay attention to consequences of screen time use in adolescence. Additional research is needed to further explore these associations.

Key messages:

- Public health policy and practice should pay attention to screen time in adolescence and its association with psychological distress.
- This knowledge is important to enhance mental health in adolescence.

Sense of belonging and its association with health among people of foreign background in Finland

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Background:

Sense of belonging is recognized as an important determinant of health. There is little research on the association between sense of belonging and health of people of foreign background (PFB) in Finland. In this study we examined: 1) to which extent PFB feel they belong to the Finnish society and citizens of their country of origin (CCO) and 2) if sense of belonging is associated with self-perceived health.

Methods:

Data from a cross-sectional survey FinMONIK conducted in Finland 2018 was used. The random sample consisted of PFB (N = 12 877, response rate 53%). Identity was assessed by using the question ‘‘Which of the following areas or groups you feel you belong to?’’ with response options ‘‘My local municipality’’, ‘‘Finns’’, ‘‘the citizens of my country of birth or origin’’. Based on this, we constructed a variable to group respondents belonging 1) only to the Finnish society, 2) only to CCO and 3) to both Finnish society and CCO (bicultural identity). Self-perceived health was measured by using a 5-point-scale and merging good and fairly good as a good perceived health factor. Logistic regression was used to test the association between perceived health and sense of belonging, adjusted for age, sex and country of origin.

Results:

Majority of the respondents (39%) reported a bicultural identity, whereas 21% felt they belonged only to the Finnish society and 23% only to CCO. Self-perceived health was significantly associated with sense of belonging ($p < 0.001$). Good perceived health was more common among those with bicultural identity (73%) than among those who felt belonging only to the Finnish society (66%) and CCO (63%).

Conclusions:

Bicultural identity was most common and also associated with better perceived health.

Key messages:

- Sense of belonging to both host country citizens and CCO is likely to benefit individual’s health.
- Identifying with host country citizens and maintaining sense of self as a member of CCO should be supported.

G-CSF spending: Cost Impact of an intervention conducted in a French area: Pays-de-la-Loire

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Issue:

Granulocyte colony-stimulating factors (G-CSF), recommended by international oncology guidelines as a prophylaxis of febrile neutropenia are expensive drugs. Despite biosimilars marketing since 2008, G-CSF spending represents a major and growing expense for health insurance.

Description of the problem:

Between 2010 and 2013 an unsustainable increase of G-CSF spending by 20% occurred in a French area: Pays-la-Loire. An intervention based on guidelines was carried out to the oncologists involved in ambulatory cancer care to reduce G-CSF spending by improving prescription and promoting biosimilars. Hospital oncologists have been the main target. A partnership between physicians and pharmacists of the Brittany - Pays-de-la-Loire Cancer Dedicated Observatory network and the Pays de la Loire Medical Department of Health insurance composed the operational team involved in the work. Interrupted time series analysis based on the French national health data system database were chosen to assess the impact of the intervention on G-CSF spending, their prescription and biosimilars use.

Results:

Twelve professional meetings were performed to cancer medical teams from 7 community hospitals and 5 private hospitals of the Pays-de-la-Loire region. This intervention reduced G-CSF spending by 11% and improves G-CSF local use.

Lessons:

This type of multi-stakeholder intervention carrying common to various health actor’s messages represents a promising tool to improve the quality of care and the control of health expenditure. These results and the possible cost saving showed have encouraged the heads of French health insurance to promote this action in 2019 in the whole France.

Key messages:

- In the current context of unsustainable increases in cancer cares related costs in France the rational use of G-CSF’s seemed to be one available resources.
- biosimilar promotion for ensure broad access to innovative cancer therapeutic for patients and finance cancer prevention campaigns.

1.Q. Paid work, sickness absence and workforce management

Emotional demands at work and risk of long-term sickness absence among 1.5 million Danish employees

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Background:

Emotional demands concern aspects of work requiring an emotional effort of employees and have been associated with risk of depression and long-term sickness absence (LTSA) in previous studies. Associations may, however, partly be affected by reporting bias. Further, previous studies have primarily been conducted using smaller samples in selected job groups or sectors. We, therefore, examined the association between emotional demands and LTSA using a job exposure matrix (JEM) in a nationwide cohort.

Methods:

We included all employed individuals in Denmark who were 30 to 59 years old in 2000. We assessed emotional demands at work with a JEM. JEM values were categorized into quartiles based on the distribution within each year and updated annually from 2000 to 2009. LTSA was register-based, defined as ≥ 6 weeks and assessed until 2015. Individuals with LTSA from 1998 to 2000 were excluded, yielding a sample of 1,521,352 individuals. Exposure in year t was related to outcome in year $t+1$ until 2009. We estimated hazard ratios (HR) and 95% confidence intervals (95%CI) using Cox regression adjusted for age, sex, income and ergonomic job demands.

Results:

During 15,453,980 person-years, we identified 594,858 LTSA cases. In the fully adjusted model, individuals in the highest emotional demands quartile had a HR of 1.30 (95%CI: 1.29-1.31) compared to individuals the lowest quartile Repeating the analysis separately for women and men showed similar results.

Conclusions:

Emotional demands at work were prospectively associated with an increased LTSA risk in this JEM based nationwide cohort study.

Key messages:

- This study found that emotional demands at work predict risk of long-term sickness absence.
- Future studies should focus on factors that may buffer the association between emotional demands at work and long-term sickness absence.

Labor market outcomes before and after first episode of part-time sickness absence

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Background:

Previous research suggests that part-time sickness absence (PTSA) results in better work participation compared to full-time sickness absence (FTSA), but few studies have examined trends in FTSA and unemployment before and after PTSA.

Methods:

This Finnish population-based cohort study included 3406 individuals with first episode (>30 days) of PTSA in 2011 (= PTSA group), 42 510 individuals with FTSA (>30 days) in 2011 (= FTSA group), and 25 167 individuals with no sickness absence (>30 days) in 2011 from the general working-age population. Annual days of FTSA from 2007 to 2015 and unemployment from 2012 to 2015 were measured for the participants of each group. We modeled trends and relative risks for these labor market outcomes using negative binomial regression with generalized estimation equations.

Results:

For the PTSA group, the adjusted mean annual number of FTSA days was 3 in the beginning of the follow-up, 15 a year before the index year, and 8-10 after the index year. The adjusted risk ratio (RR) of FTSA days after versus before PTSA was 1.95 (95% CI 1.75-2.17). For the FTSA group, mean of sickness absence days was 4 in the beginning, 13 a year before the index year and 9-19 after the index year. The mean of FTSA was 1-2 throughout the follow-up in the general population. An increasing slope in unemployment after the index year was observed in all groups, the absolute level of unemployment being highest among FTSA group and lowest among the general population group.

Conclusions:

Long-term PTSA marks a decline in labour market participation. In absolute terms this decline is smaller than that in employees with long-term FTSA.

Key messages:

- Part-time sickness absence lasting >30 days marked an increase in full-time sickness absence although the absence levels did not reach those observed after full-time sickness absence of > 30 days.
- Our results show smaller impairment in labour market outcomes in employees granted a long-term part-time sickness absence than in those with long-term full-time sickness absence.

Work-pressure, job-satisfaction and turnover intentions among health managers in Serbia

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Background:

Rationalization, freezing of salaries and additional taxation of salaries above a certain amount have marked the reform of the public health sector in Serbia in 2014/15. Health managers bear responsibility for success in reform activities, and improvement of subordinates' job satisfaction and health care quality with constrained resources. This study explored factors associated with work-pressure, turnover intentions and job satisfaction among health managers in 323 public health institutions in Serbia.

Methods:

Data of the 2015 job satisfaction survey of the Ministry of Health and the Serbian Public Health Institute were used to carry out a secondary analysis. Logistic regression was applied, including factors such as age, gender, occupation (doctors, nurses, other health workers, healthcare associates and non-medical managers), workplace, work-conditions' satisfaction, general job satisfaction, and turnover intention in relation to work-pressure of 7818 health managers (response rate was 91.5%).

Results:

Almost 39.5% of the health managers experienced high/very high work-pressure ($p < 0.001$), 51.2% were dissatisfied ($p < 0.001$), and 23.7% had turnover intention outside the health sector/country ($p < 0.001$). High/very high work-pressure positively correlated with health managers of secondary (Odds Ratio-OR $= 1.37$, $p < 0.001$) and tertiary care institution (OR = 1.72, $p < 0.001$), female sex (OR = 1.19, p = 0.004), younger than 55 years of age (OR = 1.26, $p < 0.001$), and nurses (OR = 1.13, p = 0.024). Other factors showing positive correlations include job dissatisfaction in general ($p < 0.001$) and with all workplace conditions ($p < 0.001$), as well as turnover intentions ($p < 0.001$).

Conclusions:

Work pressure of health managers seems to be perceived highest in the group of younger female nurse executives in hospital care. Their dissatisfaction with the job in general and with the working conditions, as well as turnover intentions positively correlate with the increase of work pressure.

Key messages:

- Improving working conditions and job satisfaction is key to reduce work pressure of health managers.
- Young female nurse managers perceive highest levels of work pressure, and need reinforcement at work.

A life course analysis of income and incident AMI - a Danish register based cohort study

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Background:

Social inequality in ischemic heart disease has been related to socioeconomic position in childhood, early and late adulthood. However, the impact of relative level of accumulated income periods across adult life course and the potential gender and age differences has not been investigated.

The aim was to investigate the association between relative level of accumulated income across the life course and Acute myocardial infarction (AMI) from age 60+ and to study if the associations differ by gender and exposure in different age groups (30-39 years, 40-49 years and 50-59 years).

Methods:

All Danes born 1935-54 N = 1,235,139 were followed-up in registers for incident AMI (ICD8: 410, ICD10: I20, I21) from age 60+, (42,669 cases). The The Accumulated Proportional Deviation from Median Equivalized Income = APDMEI for each gender/age /calendar year strata was constructed and divided in quartiles. The analyses stratified by birth cohort included all Danes born in 1955-70 (alive and reached age 40) N = 1,144,264, 1945-64 (alive and reached age 50), N = 1,434,769, 1935-1954 (alive and reached age 60) N = 1,235,139 including outcomes in the following 10 year period. Cox's proportional hazard models adjusted for educational level, ethnic background and birth cohort.

Results:

Among men, those in the lowest APDMEI quartile had a HR 1.40 (1.35-1.45) of AMI compared to the highest quartile, second and third highest quartiles had HR of 1.24 (1.20-1.28) and 1.14 (1.10-1.18), respectively. Among women the lowest quartile had a HR of 1.78 (1.69-1.88), the second 1.45 (1.37-1.53) and the third 1.19 (1.13-1.26). The social gradient was similar across the different age-groups.

Conclusions:

The risk of AMI increased with lower levels of relative accumulated income across the life course. While men generally had a higher risk of AMI, the social gradient was steeper in women. There was no indication of a specific sensitive age period for exposure to relative level of accumulated income.

Key messages:

- Accumulated low income is associated with higher AMI risk in both men and women, but with larger relative differences between high and low accumulated income in women.
- This study adds a new approach to the study of inequalities in AMI by integrating duration and extent of low income into a relative measure of accumulated income.

Vaccination role on abseteeism during a severe flu season: following the Global Influenza Strategy

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Background:

In March 2019, the WHO published the ''The Global Influenza Strategy for 2019-2030'', with the goal of strengthening seasonal prevention and control and preparedness for future pandemics. Accordingly, to the 2B, 2C, 3B goals, this study tries to assess the burden of the disease among the healthcare workers (HCWs). Our study aimed to estimate the impact of severe intensity season on absenteeism among HCWs in a large Italian hospital and if the vaccination rates would be associated with reduced sickness absence.

Methods:

We investigated excess of absenteeism that occurred in a large Italian hospital, counting 5300 HCWs, during the flu season of 2017-2018. Data on influenza vaccination were gathered from the Occupational Health Unit, while absenteeism data from the hospital's Personal Unit Database. The data collection ranged from July 2017 to June 2018, it was divided into two periods: epidemic and non-epidemic, the last one used as a baseline to calculate excess of absenteeism. We also gathered other variables in order to stratify the absenteeism among HCWs.

Results:

The total lost days were 53.775. The average number of lost days per week during the epidemic period was 1263. Compared to the non-epidemic period, absenteeism increased by 65% (from 4.05 to 6.68 days/person). Vaccinated HCWs had a lower excess of absenteeism in comparison to non-vaccinated HCWs (1,74 vs 2,71 days/person). Nurses and allied health professionals registered the highest excess of absenteeism (3.16 days/person) while medical doctors showed the lowest (0.76 days/person).

Conclusions:

A severe influenza epidemic impacts on the excess of absenteeism among HCWs. Although the low vaccination rate (6,8%), a positive effect on absenteeism is outlined and it may support health care facilities to promote and facilitate flu vaccination among HCWs. As literature states low absenteeism rate, as seen in medical doctors, could be an indicator of presenteeism that might lead to harm the inpatients.

Key messages:

- The flu vaccination has a positive effect on reducing the absenteeism rate in the HCWs during the epidemic period and should be promoted and advocated among european healthcare facilities.
- A low absenteeism rate may also be an indicator of presenteeism among HCWs, which may also be harmful to the inpatients.

2.A. Determinants of health equity

Household Income, Life Expectancy and Cause Specific Mortality in Norway, 2005-2015

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Background:

Examining causes of death and making comparisons across countries may increase understanding of the income-related differences in life expectancy. We describe income-related differences in life expectancy and causes of death in Norway and compare with US estimates.

Methods:

A registry-based study including all Norwegian residents above age 40 between 2005 and 2015. Exposure was household income adjusted for household size and outcomes were life expectancy at age 40 and cause specific mortality.

Results:

3 041 828 persons contributed 25 805 277 person years and 441 768 deaths in the study period (mean age: 59.3 (SD, 13.6). Life expectancy was highest for women with the top 1% income at 86.4 (95% CI, 85.7 to 87.1) years, 8.4 (95% CI, 7.2 to 9.6) years longer than women in the lowest 1% income. Men with the lowest 1% income had the lowest life expectancy at 70.6 years (95% CI, 69.6 to 71.6), 13.8 years (95% CI, 12.3 to 15.2) less than men with the top 1% income. From 2005 - 2015, the differences in life expectancy by income increased, largely attributable to deaths from cardiovascular disease, cancers, COPD and dementia in older age groups and substance use deaths and suicides in the younger. Over the same period, women in the top income quartile gained 3.2 years (95% CI, 2.7 to 3.7), while life expectancy for women in the lowest income quartile was reduced by 0.4 years (95% CI, -1.0 to 0.2). For men, the top quartile gained 3.1 years (95% CI, 2.5 to 3.7) and the bottom gained 0.9 years (95% CI, 0.2 to 1.6). Differences in life expectancy by income levels in Norway were similar to those observed in the United States, but life expectancy was higher in Norway in the lower to middle part of the income distribution.

Conclusions:

In Norway, there were substantial and increasing gaps in life expectancy by income from 2005 - 2015. The largest differences in life expectancy between Norway and US were for people in the lower to middle part of the income distribution.

Key messages:

- In Norway, a country with a largely tax financed universal health care system and moderate income differences, life expectancy by income are substantial and have increased between 2005 and 2015.
- The largest differences in life expectancy between Norway and US were for people in the lower to middle part of the income distribution.

Economic hardship over twenty-two consecutive years of adult life and markers of early ageing

Else Foverskov

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Background:

The authors examined the associations between annual measures of economic hardship (EH) across 22 years of adulthood and objective measures of early ageing in a Danish late-middle aged population.

Methods:

A linkage of longitudinal register data from Statistics Denmark covering the period 1987-2008 and cross-sectional survey data from the Copenhagen Ageing and Midlife Biobank collected in 2009-11 (N = 5,575). EH was defined as < 60% of the National median equivalized household disposable income and two exposures were calculated: 1) a categorical measure of total number if years in EH, and 2) trajectories of the probability of EH being low, declining, rising or high. Early ageing outcomes included four measures of physical capability, three inflammatory markers and one cognitive test. Associations were analyzed using linear regression models adjusted for sex, age, cohort, education, baseline income and long-term parental unemployment/financial problems.

Results:

Four or more years in EH (reference = null years in EH) was related to poorer physical capability (chair rise: -1.49 counts/30 seconds [95% confidence interval (CI) -2.36, -0.61], hand grip strength: -1.22 kg [95% CI -2.38, -0.07], jump height: -1.67 cm [95% CI -2.44, -0.91] and balance: 18% [95% CI 9, 28]), poorer cognitive function (Intelligenz-Struktur-Test: -1.50 points [95% CI -2.89, -0.12]) and higher inflammatory levels (C-reactive protein: 22% [95% CI 4, 44], and Interleukin-6: 23% [95% CI 10, 39]). Comparing the four EH trajectories, people with a high vs. low probability of EH over time had poorer physical capability (chair rise: -1.70 counts/30 seconds [95% CI -3.38, -0.01], grip: -4.33 kg [95% CI -6.50, -2.16], jump: -1.68 cm [95% CI -3.12, -0.25], and balance: 31% [95% CI 12, 52]). No associations were observed with Tumor necrosis factor α.

Conclusions:

This study suggests that sustained EH across adulthood may lead to early ageing.

Key messages:

- Sustained economic hardship in adulthood may lead to early ageing.
- Being in economic hardship for a few years is not associated with early ageing.

Long-term effects of a housing support intervention in homeless people with severe mental illness

Sandrine Loubiere

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Objectives:

Recent studies have suggested that the Housing First model is a promising strategy for providing effective services to homeless people with mental illness at a short-term horizon. The paper assesses the long-term effects of an independent housing with a recovery-oriented approach in homeless people with severe mental illness on social recovery, mental symptoms and quality of life among homeless adults with high support needs for mental and physical health services.

Design and methods:

“Un Chez Soi d’Abord” was a randomized controlled trial conducted in 4 French cities: Lille, Marseille, Paris and

Toulouse. From August 2011 to April 2014, homeless participants with a DSM-IV-TR diagnosis of bipolar disorder or schizophrenia (N = 703) were randomly assigned to Housing First (n = 353) or Treatment as Usual (n = 350). Mental symptoms (MCSI), social recovery (RAS), global physical and mental status (SF-36), subjective quality of life (S-QoL) and addictions (MINI) were collected every 6 months over 48 months. Mixed models using a longitudinal and cluster design were performed, and adjusted to age on the street, gender and mental disorder diagnosis and testing for time-group and site*time interactions.

Results:

HF patients exhibited higher recovery ($\beta = 3.6$, 95%CI: 0.4 to 6.9), higher S-QoL (4.7, 1.1 to 8.3) such as the self-esteem (10.9, 5.8 to 15.6) and physical well-being (8.4, 3.1 to 13.8) sub-dimensions, and improved mental health symptoms (-3.1, -5.4 to -0.9) over the 4-year follow-up. No significant differences were observed for SF36 scores. HF and TAU participants experienced similar alcohol or substance dependence evolution between baseline and 48 months.

Conclusions:

HF is a highly effective intervention associated with improved relational environment, enhancing recovery and quality of life in homeless people with schizophrenia or bipolar disorders. Addiction issues have been identified and should be targeted so as to further improve the Housing First approach.

Key messages:

- Housing First model is a highly effective intervention.
- Housing First model enhances recovery and quality of life in homeless people.

Europeans' willingness to pay for ending homelessness: a contingent valuation study

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Objective:

In Europe, 4 million people were homeless in 2009. The Staircase model of care targeted mental health, drug rehabilitation and housing readiness yields poor long-term housing results. Western countries are investing in a new model, Housing First (HF), which yields better clinical and social results. We aim to explore how much the European citizens are willing to pay for the HF model and what are the determinants of this valuation.

Methods:

A nationally representative telephone survey conducted in 2017, targeted European adult citizens from France, Ireland, Italy, Netherlands, Portugal, Spain, Poland and Sweden. Respondent's willingness-to-pay (WTP) (n = 5,631) for HF model was assessed through a contingent valuation method with bidding algorithm. Multivariate analyses using two-part models with a cluster and weighted design were conducted to predict: 1/ respondents' refusal or incapacity to pay for the HF model; 2/ willingness-to-pay (continuum) for the HF model.

Results:

42.3% of respondents were willing to pay more taxes to reduce homelessness through HF model; 30.3% were protest zero (don't want to pay taxes (either contested the payment vehicle-taxes- or the survey instrument); huge differences being observed between countries (P<.001). Respondents were willing to pay €57 (+/- 9) through annual taxes for the HF model. Respondents with higher educational attainment, paying taxes on income, reporting positive attitudes about homelessness or practices to reduce homelessness (donations, volunteering), and those residing in a country with higher share of social protection expenditures on family benefits or higher at-risk-of-poverty rate were more likely to value the HF model.

Perspective:

These results provide key stakeholders with an understanding of the level of support from the general population for the Housing First model; especially since the determinants of this valuation were studied according to the social and environmental context of each country.

Key messages:

- More than 42% of European citizens reported to be willing to pay for reversing homelessness.
- More than a three quarter of European citizens thought that Government spending on Homelessness is too little.

Do financial difficulties affect health? A study among older adults in Switzerland

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Background:

In perspective of health promotion strategies among older adults, it is particularly important to identify socioeconomic determinants associated with the dynamic of health. In this study, we want to assess the role of financial difficulties on health among older adults.

Methods:

We use cohort data coming from the Lausanne cohort 65+. Participants were community-dwelling older adults representative of the general population aged 65 to 70 years in 2004 and living in Lausanne (Switzerland). This cohort is a longitudinal survey and was designed as an annual survey where same individuals (N = 1564) are re-interviewed in successive waves. Wave 1 and wave 2 are considered as baselines. We perform our analysis on the 2006-2016 period (11 waves). We consider the health dynamic by estimating system GMM estimators. Our main explanatory variable is a proxy of financial difficulties: "Have you been confronted to financial difficulties in the last 12 months?". We study the effect of this variable on several health indicators (self-rated health, number of medical conditions, depression, difficulties in activities in daily living) and evaluate if this effect is similar for these different dimensions of health.

Results:

Our econometric analysis underlines the importance of using dynamic approach: health lag variables have significant effects ($p < 0.01$) and to control for endogeneity bias. We find no evidence of a causal link from having financial difficulties to health. The effect was non-significant for all health variables.

Conclusions:

In terms of public policy, our results provide insight that policies allowing to limit short term financial difficulties are not essential to protect elderly against health deterioration.

Key messages:

- There is no evidence of a causal link from having financial difficulties to health.
- Policies allowing to limit short term financial difficulties are not essential to protect older adults against health deterioration.

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2.B. Workshop: Developing interventions to improve migrants' healthcare access in Europe

Organised by: MyHealth Project
Chair persons: Núria Serre-Delcor - Spain, Stella Evangelidou - Spain
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The proposed workshop "Developing interventions to improve migrants' healthcare access in Europe" will present interim results from the cross-disciplinary MyHealth project to discuss them and the early lessons with policymakers, academics, funders and practitioners in the area of migration and health.

MyHealth (Models to engage migrants and refugees in their health, through community empowerment and learning alliance) is a three-year project coordinated by Fundació Hospital de la Vall d'Hebrón, Institut de Recerca (VHIR), Barcelona, Spain and implemented by a consortium of eleven partners with the CHAFEA support in the framework of the 3rd EU Health Program. The goal of the MyHealth project is to improve the healthcare access of vulnerable migrants and refugees (VMR) newly arrived to Europe, by developing and implementing models based on the knowhow of a European multidisciplinary network. This project strongly relies on a participatory approach to ensure a beneficiary-centred approach in implementing a number of interconnected objectives. To ensure a meaningful involvement of the community we applied the Metaplan technique to identify health concerns and needs perceived by vulnerable immigrants and also by professionals from diverse backgrounds working with them at the four partnering sites (Barcelona, Berlin, Brno and Athens). The Metaplan© is a qualitative technique that involves first collecting ideas or information on cards, grouping the cards according to shared characteristics, and ultimately, using a voting system to rank individual ideas or groups of ideas. The research team used this methodology to validate the health needs of immigrants identified by the MyHealth needs assessment methodology and prioritize them, and to generate, categorize and prioritize suggested solutions. These results will be analysed to identify community health strategies and to implement pilot interventions most relevant for the cultural and social reality at each of the sites. Further, the effectiveness of these interventions as a dissemination model will be evaluated. As an innovative approach, the project uses a Learning Alliance methodology to engage multiple stakeholders in the research process through a series of interconnected networks. Each of the he partners aim to document and reflect on best practices for the improvement of the migrants' access to healthcare and thus provides an opportunity for mutual learning for the consortium members and their respective networks. The workshop will feature presentations by MyHealth partners that will be followed by the moderated Q&A session with the panel of presenters. The workshop participants feedback will be additionally sought through a self-administered workshop evaluation questionnaire. The workshop will facilitate the information exchange and discussion between the MyHealth consortium partners and other ongoing initiatives to improve migrants' healthcare in European countries.

Key messages:

- The community engagement in the development of interventions to facilitate the access to health services while ensuring quality care to migrants community is pivotal in health promotion initiatives.
- In spite of the notable variability across the sites, the ubiquitous barriers were associated with both host and migrant communities, for which the future interventions would need to account.

Community engagement towards the development of health promotion tools: Summary findings of Metaplan sessions in Barcelona

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Background:

Spain has been a popular destination for immigrants mainly because of its cultural proximity with Latin America and its geographical proximity with Africa. More than 70% of migrants in the Spanish autonomous region of Catalonia reside in its capital city, Barcelona. The community engagement in the development of tools, which facilitate access to health services while ensuring quality healthcare provision to Vulnerable Migrants and Refugees (VMRs), is pivotal in health promotion initiatives.

Methods:

The participation of the target population in the decision-making process over strategies to increase healthcare access was assured by employing the Metaplan© methodology. Five Metaplan group sessions were conducted in Barcelona with VMR: One with professionals (N = 13), two with young adults (N = 4, N = 6), one with women (N = 6) and one with Latin Americans (N = 9). All sessions were conducted at the Community Medicine Unit of Vall d'Hebron University Hospital.

Results:

Two main categories of solutions were found through a thematic analysis. Primarily, the solutions associated to initiatives that the host community needs to undertake included: promotion of socio-economic stability for VMRs, communication campaigns though informative leaflets and orientation sessions on immigrants' rights and available health services, as well as community-based interventions such as empowering the work of community agents/"health champions", establishing mobile clinics and setting-up (peer) support groups. The second category of solutions was related to the personal barriers VMRs may face: improvement/acquisition of language skills and the importance of addressing one's mental health problems.

Conclusions:

Both the host community and the immigrants themselves are co-authors of the design and implementation of efficient health promotion strategies towards healthcare access and improvement of healthcare quality provision for VMRs in the given socio-cultural context of Barcelona city.

In the search of solutions to improve healthcare access for migrants and refugees in Athens, Greece

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Background:

Migrants and refugees face many challenges in their effort to access the health services. The Metaplan© methodology was applied to generate and prioritize solutions and tools for pilot interventions to improve migrants' healthcare access in

Athens. Methods. The Metaplan sessions included three groups: professionals working with refugees and migrants, mixed gender French-speaking migrants and refugees, and unaccompanied minors (11-16yrs).

Results:

Professionals prioritized the communication issue, particularly a proper delivery of the language courses, and the enhancement of cultural competence in professionals. Besides, the instrumentalization of 'vulnerability' was focused on the relocation assessment. They suggested trainings to improve the collaboration between interpreters and professionals and build cultural competence, along with creation of migrant-friendly hospitals. The migrants underscored a gap between their needs and the current efforts to support their integration, such as language courses, job consultancy, and general information. Their access to health services was hindered by the lack of language skills and intercultural competences of providers. The migrants prioritized initiatives to overcome the challenges of everyday life, raise awareness and sensitize the local community on their realities, and tackle racism. The unaccompanied minors underlined the lack of shelters and a long bureaucratic procedure for the placement in a shelter as some experienced homelessness. They also pointed out the inefficiency of emergency health services. The solutions as perceived by this group included a proper assignment of homeless minors to shelters, better emergency units and more information about the health services.

Conclusions:

The trainings for both health professionals and interpreters for the interdisciplinary cooperation and enhanced cultural competence are needed, along with informative workshops and flyers on health rights and services.

Informing the development of a pilot intervention to improve migrants' healthcare assess in Brno, Czech Republic

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Background:

Third-country nationals have the least access to healthcare in the Czech Republic yet representing the largest group of migrants. This study aimed to inform the development of a pilot intervention to improve migrants' healthcare access in Brno, Czech Republic, within the existing health policy framework.

Methods:

A Metaplan© qualitative technique was applied to ensure the community participation, through separate sessions with social integration professionals and third countries nationals. Each group first identified issues in migrants' healthcare, then suggested solutions to address these issues and prioritized these solutions.

Results:

The professionals' group included five representatives of social integration service providers and administrators. The majority of migrants were female, with higher education, ages 35-55 years, arrived in two years mainly from Ukraine, and not employed.

The social integration professionals were more knowledgeable of healthcare policy and migrants' rights and suggested a wider scope of solutions. The migrants underscored the role of reliable information as a critical tool in utilizing healthcare services. Both groups prioritized an open access to the information as a direct benefit to the users. Other suggestions included multilingual mobile applications, visual aids and translation services, bilingual doctors and universal access to public health insurance. The feasibility of these solutions varied and so their value as intervention models.

Conclusions:

The future interventions should focus on health literacy in the migrant community. This would include the dissemination of multilingual information on health emergency, children vaccinations, health insurance and healthcare system, among other topics, and interactive trainings for migrants and social counselors, to improve self-efficacy in both groups.

Participatory research for developing health promotion campaigns for migrants and host community in Berlin, Germany

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Background:

During the current refugee crisis, hundreds of refugees left their homes and fled to Europe. The country that received the highest rates of refugees was Germany, which above all presented a challenge to the healthcare system. This study aimed to inform the development of a pilot intervention to improve migrants healthcare access in Berlin, Germany.

Methods:

A Metaplan© qualitative technique was applied to ensure the community participation, with three sessions with refugee and asylum seeking women and youth in Arabic, Somali and German languages, and one with professionals. With each group, participants identified issues in migrants' healthcare, then suggested solutions to address these issues and prioritized these solutions.

Results:

The migrants (n = 30) were mainly from Syria (n = 4), Somalia (n = 14) and other African countries, mainly females (17-53 yrs) and youth (16-18yrs). The professionals' group (n = 13) included an interdisciplinary team of a psychiatric day clinic. All groups prioritized language barriers as a crucial problem and suggested to work with interpreters to facilitate the communication. Professionals are additionally confronted with cultural differences in the treatment of refugees. Somali women prioritized raising the awareness about Female Genital Mutilation in the healthcare system and also in their community. Other suggestions included supervisors for unaccompanied minors, multilingual forms, increased intercultural competence of health care providers and reducing waiting time for an appointment.

Conclusions:

Future interventions should focus on intercultural competences for professionals and health-promoting information in the specific sociocultural context of migrant communities. This would include the dissemination of multi-lingual doctors' brochures, interactive training for health care providers as well as informational workshops for migrants to increase their health literacy and promote health-enhancing behaviors.

2.C. Digital health

E-health for healthcare system users & social and geographic health inequalities, literature review

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Objective:

EHealth has been taking a growing part in public health policies and seems to make it possible to break space and time barriers currently impacting health and well-being (by improving care coordination, prevention, decision support and helping care delivery). However, there is a growing literature on eHealth-related digital divides. We therefore need to understand better the interface between social and geographic vulnerabilities and eHealth services. Previous reviews of the literature started exploring it but lacked a sufficient framework that would be useful for health professionals to adapt to their practice.

Methods:

We carried out a scoping literature review of these relationships in scientific literature since 2000 in Western countries in Scopus, PubMed, PsycArticles, SocIndex, PBSC.

Results:

The links between eHealth oriented towards healthcare system users and social and geographic health inequalities (SGHI) can be observed at three levels: access to digital technologies, understanding of digital technologies and of the information provided (eHealth literacy) and adoption of these technologies to help improve one's health. People's vulnerabilities can become real inequalities regarding eHealth, in a cumulative way. Several types of vulnerabilities are analysed.

Conclusions:

EHealth is more easily accessed by people who need it the least. These unintended consequences have to be taken into account while developing eHealth and more research needs to highlight them. This review contributes insights about eHealth and health inequalities descriptors thus describing better SGHI and of digital technologies fields. It presents a thorough description of this field which has not been sufficiently described in the literature. It is a large scoping review offering a knowledge cartography which purposely addresses the whole spectrum of these links. In the future, it will be interesting to perform further in-depth systematic analyses on specific sub-issues.

Key messages:

- EHealth is more easily accessed by people who need it the least. These unintended consequences have to be taken into account while developing eHealth and more research needs to highlight them.
- This review contributes insights about eHealth & health inequalities descriptors. It offers a knowledge cartography and a strong basis for further in-depth systematic analyses on specific sub-issues.

Could machine learning aid the production of evidence reviews? A retrospective test of RobotAnalyst

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Background:

The Observatory Evidence Service (OES) at Public Health Wales supports evidence informed decision making by conducting evidence reviews, which follow systematic review methodology, on complex public health topics. Machine-learning technologies have the potential to aid in screening studies for inclusion in reviews, and the OES have undertaken testing of one such system, RobotAnalyst, to assess its accuracy and to determine if it would increase the efficiency of the review process.

Methods:

Retrospective testing was undertaken using three previously completed evidence reviews. For each test, references were uploaded into RobotAnalyst and the decisions made by the original reviewers were input in blocks of 25 to form a training set. The ''update predictions'' function generated a predicted inclusion decision for the remaining references at each test point and these were compared to the original review decisions.

We calculated RobotAnalysts sensitivity, specificity, positive predictive value, false include and exclude rate and the proportion of missed references.

Results:

Mixed levels of performance were observed. An overall increase in sensitivity as more studies were added to the training set was detected for two of the three reference sets when screened at title stage, but only in one case did RobotAnalyst produce relatively high levels of sensitivity (over 90%). This was observed in reference test set one (n = 500 references), where sensitivity increased from 51% at the start of testing to 91% after 250 references had been manually marked on the system. Although performance tended to be higher as more studies were added to the training sets, the increases were not always linear.

Conclusions:

There may be some promise in using RobotAnalyst as a second screener, especially on larger reference sets when the human resource demands of duplicate screening are considerable. We are continuing to test RobotAnalyst both retrospectively and prospectively.

Key messages:

- Retrospective testing of RobotAnalyst observed mixed levels of performance.
- RobotAnalyst could potentially be utilised as a second screener for evidence review.

MS-Diet, a tailored nutrition counselling web-application based on mathematical diet optimization

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Background:

By definition, messages in tailored approaches are built to reach a given person, based on her/his specific characteristics and needs. Tailored dietary behavior change interventions have a small but significant effect on dietary behavior change. The majority of these interventions target a few food groups or nutrients, without evaluating the overall diet. Diet optimization is a powerful mathematical method to translate nutrient recommendations into individual-specific food choices. This method is increasingly used in nutrition research, in the fields of public health and diet sustainability. Objective: The aim was to combine tailored approaches and diet optimization in a web application of tailored nutrition counselling.

Method and results:

The web application, called MS-Diet, was developed based on behavior changes techniques, such as: self-monitoring, self-regulatory, tailored feedback and engaging communication techniques. In a first feature, based on user's data collected online (including answers to a food frequency questionnaire), the user can obtain a picture of the nutritional quality of her/his diet, the diet cost and the level of physical activity. In a second feature, MS-Diet suggests to the user a list of tailored dietary advices to get a healthier diet (i.e., a nutritionally adequate diet), adapted to her/his specific needs and food preferences. With the application, the user is actor in her/his own dietary changes: she/he specifies her/his food preferences and; chooses dietary suggestions that she/he considers achievable.

Conclusions:

This prototype could be a future online health promotion tool which could help individuals to improve their diet or serve as a decision-support tool for health professionals. The evaluation of the tool (e.g. whether the use of the tool results in changes of dietary habits) is warranted before use on health promotion.

Key messages:

- MS-Diet demonstrates how diet optimization can be used to design dietary advice adapted to user's needs and food preferences.
- MS-Diet is a promising tool to help individuals improving their diet but requires qualitative and quantitative evaluation for further improvements.

National survey on telemedicine education and training among medical students and residents in France

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Telemedicine was defined in France in 2009 and until 2017 integrated into the official medical school and residency programs. A national survey among medical school deans indicated a lack of implementation of telemedicine education and training despite positive attitudes towards it. In September 2018, teleconsultation started to be reimbursed for all doctors and patients by the National Health Insurance.

The objective was to describe the knowledge, attitudes, and practices of medical students and residents in France on telemedicine. A national voluntary online questionnaire-based survey was conducted from December 15th, 2018 to March 3rd, 2019. The survey was shared by the French Society of Telemedicine (SFTelemed), the National Association of French Medical Students (ANEMF), and the National Union of Medical Residents (ISNI).

There were 3329 answers, with 67.5% of participants being women and 69.8% being medical students and 30.2% residents. In total, 82.8% declared telemedicine was relevant to improve access to care. 84.8% did not know telemedicine regulations at all. 86.9% declared they knew the definition of teleconsultation and only 40.3% for tele-expertise. 14.4% received telemedicine theoretical education, and 97.9% stated they were not trained enough. 7% practised telemedicine during their medical school education and 30% during residency. Among them 60.2% practiced telemedicine less than 5 occasions. Among those who did not practise telemedicine during their education, 82.6% answered that they would want to practice telemedicine before the end of their studies.

Medical students and residents in France have a positive attitude towards telemedicine, however, were limited to its practice. Majority of participants declared they want to be educated and trained for telemedicine during their studies. This is the first national scale study in the world and should be applied in France for other healthcare professionals and other countries.

Key messages:

- Telemedicine education and training should be provided to medical students and resident during their curriculum.
- Medical schools and residency programs need to integrate and apply telemedicine in their programs.

Research Implications for future telemedicine studies and innovations

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Despite the increasing application of information and communication technologies (ICT) in health care, robust data on the effectiveness and implementation of digital health solutions is lacking. Therefore, the objective of this analysis is to identify and categorise implications for future research in order to inform policy and practice decisions.

Systematic reviews and meta-analyses of RCTs evaluating the effectiveness of telemedicine in chronic diseases, all identified via a recent umbrella review, were used as primary sources of information. Qualitative content analysis following Mayring (2000) was used to categorize future research topics mentioned in the discussion sections and conclusions of included research published after 2015. Parallel, independent data extraction and coding using inductive category development was performed by two researchers with previous coding experience. Any disagreements were solved by discussion.

Of the 25 included systematic reviews and meta analyses, 23 reported on future research implications. They were categorised as follows: (1) Need for high quality studies including specific outcome measures; (2) Need for comprehensive technology assessment; (3) Need for in-depth considerations of patients' characteristics & more diverse study populations; (4) Ethics & Safety; and (5) Translation & implementation strategies. A codebook comprising descriptions and examples of those categories and sub-categories was developed.

Results show a need for larger and more rigorous studies with longer intervention durations, mid- to long-term follow-ups as well as more heterogeneous study populations. More pragmatic study designs to evaluate multimodal and tailored interventions like telemedicine solutions are needed to develop an improved understanding on mechanisms and target-group specific effectiveness.

Key messages:

- We need a stronger focus on relevant and well-designed studies to improve the impact of telemedicine trials.
- Identified needs have the potential to inform future guidelines for the use of telemedicine.

Telepathology and second opinion for cancer diagnosis in sub-Saharan French-speaking countries

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Many healthcare disparities can be described to explain cancer prevalence differences between developed and developing countries. Telepathology, telemedicine declination consisting in the transmission of digital images from a classical optical microscope combined with a digital camera linked to a computer, could offer a healthcare solution by enabling efficient communication between physicians and reinforcing multidisciplinary approaches. This study evaluated a pilot telepathology project using the 'i-Path' platform in Sub-Saharan French-speaking countries. This is a descriptive retrospective study. This study was made in two steps: (1) quantitative description of the platform's use by the pathologists group and (2) qualitative evaluation of the users' perception of the pilot project. From October 2009 to March 2018, 226 cases were submitted; 86·3% of them (n = 195) were analyzable. More than 30 experts in surgical pathology of 12 different countries were involved in the network. The average turnaround-time was less than one day. The main highlighted obstacles were the lack of time to submit cases and internet connection problems. Discussions on i-Path lead to a useful second opinion for 67·7% (n = 132) of the cases. The major part of second opinion was in favor of lymphoma (32·6%). Regarding children, lymphoma represent half of the second opinion (50·7%). The inter-observers agreement between first interpretation and second opinion was $\kappa = 0{\cdot}36$, and $\kappa = 0{\cdot}58$ after excluding non-diagnosed cases at submission. Even if some improvements can be made, we concluded that the project was satisfying and workable and it could be extended to other applications.

Key messages:

- Dialogue between expert in multiple LMIC is feasible with telepathology network and, as 1st diagnosis assessment is not always sure, telepathology help for 2nd opinion.
- Centers' use of the telepathology system are different but the discussion between experts still provide a 2nd opinion in favor of a precise diagnosis.

Digital media: How to adapt digital media to promote health of young people?

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A priority of the French government health section is to promote strategies to develop teenager and young adult abilities to manage their own health. Interventions must be based on digital tools on how to improve it. The Pass'santé Jeunes (PSJ) is a regional measure based on a global, positive, community approaches, and on peers interventions. Managed by the Agence Régionale de Santé since 2013, and lead by the Instance Regional d'Education et de Promotion pour la Santé, this program consists of the provision of two portals: Pass'santé Jeunes and Pass'santé pro.

This project aims to renew prevention approaches with youths, and to develop a common culture around efficient intervention strategies with professionals for linkage in digital practices. This initiative has been developed and collaborated with the targeted public, parents, and professionals. We queried the opinions of a youth panel, and requested advice of experts to assure relevance and veracity of the information. Websites were then created for professionals to locate information to support their missions.

Analysis of the actual uses of the PSJ were conducted by the University of Burgundy in 2016. Results showed much of the research leaning toward the creation of a prevention tool. For alignment with internet use by youths, we adapted the variety of media (quizzes, videos, apps...). In 2018, the average monthly audience of both sites increased significantly.Greater utilization of these resources is explained by increased awareness by professionals and prevention missions of health students.

In the health sector, challenges exist in understanding digital practices of youth and professionals, therefore it is important to play a key liaison role. First identified as an informational medium, these devices are now real resources for meeting and circulating knowledge.Prospects for 2020 are to redirect these tools to the 0-8 years age group, adapt them to situations of disability, and expand to the pregnancy period.

Key messages:

- In line with digital practices of youth, the PSJ relies on innovative communication supports, available in different formats (videos, quizzes, games, apps...).
- Beyond an informational tool for the young, the PSJ turns out to be a tool of knowledge brockering. It facilitates networking, implementation of activities, and improving health practices.

Children and digital devices: a survey on risk perception and use

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Background:

Paediatrics associations in different international contexts recommended avoiding the use of screen media in children ages 0-2 years and limiting the use to one hour per day for children ages 2-5 years. In the light of these guidelines, the aim of this study was to investigate risk perception in the general population and use of digital devices (DD) in preschool children.

Methods:

We carried out a cross-sectional study on 3115 Italian subjects including parents and non-parents, using an online survey. Parents answered questions about their children's DD use. We used multiple linear regression analysis to assess the potential predictors of devices' use in preschool children.

Results:

Overall 74% of sample think that the use of DD by preschool children is a risk for health. They perceive risks, such as having eye irritation (83%), having sleep disorders (65%) more than benefits, e.g. communicating with distant relatives (47%), and learning new words (40%). Parents of preschool children represent the 74% of all parents (N = 1869). The 56% of parents with only 0-2 years children think that is not correct the use of DDs in toddlers, however the 25% of them allow their children to use them. The mean time use reported is 63±57 minutes. Among parents who have also children from 2 to 5 years, the 89% think it is correct the use of DD up to a maximum of one hour a day for children aged 2-5 years. However, the 58% of them allow their children to use it more than one hour. The mean time use reported is 61±52 minutes. Parents without a job, having low education level, with more than one child and having children ages 3 and older, are more prone to allow the use of DD to their children.

Conclusions:

There is a discrepancy between risk perception and real attitude on DD use in children by parents. Public health actions must aim to increase awareness about a conscious use of DD in children considering the spread of DD in the society and younger people.

Key messages:

- The discrepancy between risk perception and actual behaviour means an underestimation of health impact of digital devices use in children.
- Health professionals are very concerned about the health risk of digital devices use in children. Considering the large use of digital devices, public health actors must pay attention to this matter.

2.D. Workshop: NCDs prevention through integrated approaches: reducing obesity from individuals to populations

Organised by: World Federation of Public Health Associations
Chair persons: Marta Lomazzi - Switzerland, Walter Ricciardi - WFPHA
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Non-communicable diseases, the slow motion disaster, represent one of the main global threats to health in the 21st century. Overweight and obesity are major risk factors for a number of chronic diseases and obesity has nearly tripled since 1975. Obesity can be prevented through healthy food, healthy lifestyle and anti-obesogenic environments. Effective multidisciplinary and intersectorial approaches are needed now more than ever and public health strategies should tackle the social determinants of health through the adoption of a common risk factor approach, which start from the mouth to reach the rest of the body. This applies to preventive actions, investments and advocacy with the government and the food industry.

This workshop aims to discuss challenges and leverages to increase integrated approaches to prevent NCDs through healthy nutrition, focusing on the need to tackle the body as a whole as well as providing the skills necessary to understand and play the power game related to food and food industry.

The workshop will start with a critical analysis of the key actions and debates at the global level, focusing afterwards on the sugar-sweetened beverage (SBB) laws and the need to re-legitimate the mouth as an integral part of the body to increase the effectiveness of prevention. The country case of Italy will give an important perspective from a country that has always been associated to the healthy Mediterranean diet but has reverted the trend in the last few years, especially among children. The debate will then lead to an analysis of the effective approaches, which can be applied to fight the obesity trend with a special focus on government roles and wrestling with industry.

The obesity prevention strategies as described above will be analysed through the Global Charter for the Public's Health (The Charter) lens, a joint effort of WFPHA, multiple stakeholders, as well as the WHO, which has been developed to provide a comprehensive, clear and flexible framework to adapt today's public health to its global context. The implementation of The Charter functions and services, through a flexible approach, paves the path to reverse the obesity trend and facilitate the development of effective measures through multidisciplinary and intersectorial partnerships and effective laws. An integral part of the process is leadership from inside and outside the health sector along with people, communities, organizations, governments, concerned corporates and citizens.

This workshop will provide delegates with the information, examples and skills necessary to understand and play an active role in the ''food power game'' through the adoption of common risk factor approach and increased advocacy skills by applying The Charter in Europe and globally.

Key messages:

- Integrated and multidisciplinary approaches, including the common risk factors approach, and effective advocacy with governments and concerned corporates are key elements to prevent obesity and NCDs.
- The Charter is the flexible and innovative framework to be applied from the communities up to their governments, at national and international levels to prevent diseases such as obesity and NCDs.

Will the world be obese in 2050?

Bettina Borisch

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The workshop will be started by B. Borisch by providing a critical analysis of the obesity problem and approaches adopted.

Why integration matters

Marta Lomazzi

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M. Lomazzi will focus on the SBB example and the need to increase integration of oral and public health to rise the success of interventions.

The Italian case – reversing the obesity trend

Walter Ricciardi

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W. Ricciardi will present the Italian scenario with a critical analysis of the causes and approaches that are needed/on going to reverse the obesity increase trend in a country always associated to healthy food.

Is the solution really the 'Nanny State'. Arm wrestling with industry

Michael Moore

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M. Moore will discuss the nanny state approach and the arm wrestling with the food industry, providing examples and facilitating the development of key advocacy skills to play this power game.

2.E. Workshop: Quantifying burden of disease to support public health policy: exchange of views and experiences

Organised by: University of Bordeaux
Chair persons: François Alla - France, Jean-Claude Désenclos - France
Contact: francois_alla@yahoo.fr

Information on disease burden, risk factors, related healthcare costs and their variations over time represents a major concern for public health decision makers. These data could contribute to define priorities and strategies, to allocate resources and to evaluate health policies and interventions at regional and national levels. In this context, the use and synthesis of all available data is essential, whether these data were collected for the purpose of epidemiological surveillance, healthcare, research, and/or reimbursement. This process raises conceptual and methodological issues. The question of the use of these data by decision-makers is also essential and depends not only on their validity, but also on their credibility, their usability, and their capacity to respond to needs in the context of decision. There are now national experiences of production and use of these data. There are also international collaborations. In particular, the Global Burden of Disease (GBD) Study is an extremely structured process with extensive global collaboration.

The aim of this workshop is to exchange and share experiences on the different approaches, indicators, methods used in order to quantify the burden of disease; the use of health insurance databases as a source of data for quantifying burden of disease; the use of burden of disease information by public health decision-makers at national and local levels.

Key messages:

- Disease burden statistics are a resource for data-informed policy-making.
- Health insurance databases are a complementary source for quantifying disease burden.

The GBD project

Spencer James

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Presentation of the GBD project including data sources and methods, how it can be used to set priorities and develop a national public health policy.

The «cartographie» tool (CNAM, France)

Christelle Gastaldi-Ménager

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Presentation of the "Cartographie" tool, a mapping of health care expenditures including disease categories and its use by the National Health insurance and policy makers. Complementarity with the GBD study will be discussed.

Global Burden of Disease Study: overview and experience from England

John Newton

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Changes in health in the countries of the UK and 150 English Local Authority areas 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016.

The joint action of health information

Anne Gallay

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Presentation of the joint action of health information objectives and the burden of disease action of the workpackage 9 (Innovation in health information for public health policy development).

2.F. Cultural and health behavioural change in adolescents

Cultural values and adolescents' health inequalities in 21 European countries

Maxim Dierckens

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Background:

culture is believed to have an important impact on health and health inequalities and this may vary between countries. Empirical data are however scarce, especially in adolescent populations. We examined the impact of cultural values (emancipatory values index) on cross-national variations in adolescent health, health inequalities and evolutions in these inequalities.

Methods:

individual-level data from 21 countries participating in the 2002/2006/2010/2014 waves of the Health Behaviour in School-aged Children (HBSC) study were combined with country-level data from the World Values Longitudinal Dataset (n = 416777). Multilevel linear and logistic regression analyses were performed accounting for the hierarchical data structure (individual, country-year and country level).

Results:

cultural value differences between countries were weakly related to adolescents' health and health behaviour but had a profound impact on the magnitude of inequalities. In countries characterised by a high level of emancipatory values, material (family affluence-based) inequalities in both health and health behaviours tended to be lower whereas non-material (occupational social class-based) inequalities tended to be higher, in particular for health behaviours. Preliminary results also indicated that cultural value differences between countries may play a significant role in the evolution of adolescent health inequalities.

Conclusions:

our findings suggest that between-countries' cultural value differences may partly explain cross-national variations in adolescents' health inequalities and in the evolution of these inequalities. By identifying cultural value differences in health, health inequalities and evolutions in health inequalities, this study helps informing policies better to tackle these inequalities.

Key messages:

- Cultural value differences between countries have a profound impact on the magnitude of inequalities in adolescents' health and health behaviours and on the evolution of these inequalities.
- Identifying cultural value differences in adolescents' health, health inequalities and evolutions in these inequalities is necessary to inform policies better to tackle these inequalities.

Changes in patterns of adolescent substance use from 1988 to 2011 in Sweden: a latent class analysis

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Background:

Prevalence rates of adolescent substance use have shifted over time, although potential changes in nuanced patterns of substance use remain unexplored. We examined patterns of adolescent substance use in Sweden and changes in these patterns between 1988 and 2011. Furthermore, we investigated whether gender and internalizing problems were associated with substance use and whether these associations changed over time.

Methods:

The sample included all 15-16-year-old students in Värmland County, Sweden (N = 20,057). Survey data were collected eight times between 1988 and 2011 and analyzed as four cohorts (1988/1991, 1995/1998, 2002/2005, 2008/2011). We measured alcohol, tobacco and inhalant use and internalizing problems.

Results:

A latent class analysis showed that a three-class model fit the data best (i.e. non/low use, experimental use, and polysubstance use classes). Class- and item-response probabilities changed over time: fewer adolescents exhibited riskier substance use patterns in the later cohorts. Boys were more likely than girls to be in the polysubstance use class compared to the non/low use class across all cohorts (all ps < .001). Gender differences in experimental use differed across the cohorts. Adolescents who reported more internalizing problems were more likely to be included in the experimental and polysubstance use classes compared to the non/low use class (all ps < .001) and this effect did not change over the study period.

Conclusions:

We extended the research on trends in rates of substance use by mapping how patterns of substance use changed over time as well as how the effects of gender and internalizing problems shifted. While fewer adolescents exhibited riskier patterns of substance use in the later cohorts, these patterns were associated with experiencing more internalizing problems across the study period. Prevention efforts could be more effective by targeting patterns of substance use rather than prevalence rates.

Key messages:

- We tested whether patterns of adolescent substance use changed from 1988 to 2011 in Sweden. Fewer adolescents showed riskier substance use patterns in the late 2000s than in the earlier study years.
- Gender differences shifted over time for experimental use but not polysubstance use. Internalizing problems were consistently associated with riskier substance use patterns across the study period.

Lifestyle of young adults – changes and accumulation

Tuija Jääskeläinen

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Background:

Young adulthood is a pivotal period for many lifestyle factors becoming established and later affecting health. However, current knowledge on key lifestyle factors among young adults is limited. This study aimed to examine the lifestyle of Finnish young adults and the changes in their lifestyle between the years 2000 and 2017. Further, the accumulation of health promoting and endangering lifestyle factors was evaluated.

Methods:

The study is based on nationally representative data on young adults (aged $18-29$ years) from the Health 2000 Survey (n = 1894; 90% participated) and the FinHealth 2017 Study (n = 1162; 54% participated). Lifestyle factors were assessed in the interview and by questionnaires. The five key lifestyle factors (use of vegetables, smoking, physical activity, sleep and alcohol consumption) were dichotomized for the evaluation of the accumulation. Weighted prevalences were analyzed by logistic regression taking into account the sampling design and non-response.

Results:

In 2017, 32% (95% CI 25, 41) and 52% (95% CI 45, 60) of young men and women used fresh vegetables daily, respectively. In men, the prevalence had decreased in 2017 compared to 2000 ($p < 0.01$). The prevalence of daily smoking had decreased ($p < 0.01$) being 11% in both sexes in 2017. In men, the prevalence of the daily use of snuff had increased from 3% (95% CI 2, 5) to 8% (95% CI 5, 14) in 2017 (p = 0.01). In both years, three out of four were physically active at leisure-time and nine out of ten slept at least six hours per day. In 2017, half of the young adults reached 4 to 5 (maximum) health promoting factors whereas 17% (95% CI 11, 24) of men and 12% (95% CI 8, 18) of women reached only 0 to 2.

Conclusions:

There have been both favourable and unfavourable changes in the lifestyle of young adults during the last decades. The accumulation of health promoting and endangering lifestyle factors was observed indicating needs to versatilely prevent risks for major public health problems.

Key messages:

- Many health-endangering lifestyle factors are comparatively common in young adults.
- It is important to prevent the accumulation of health-endangering lifestyle factors in young adulthood to lower the risks for major public health problems in future.

Which are the communication styles of anti-tobacco spots that most impress adolescents?

Alice Mannocci

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Objectives:

To evaluate emotions and opinions of Italian adolescents aged 13-18 years old about different anti-tobacco spots delivered by the mass media campaigns over the world.

Methods:

A multicenter cross-sectional study was conducted. Italian students from different regions were enrolled. A video that collected 7 anti-tobacco spots from all over the world. The spots describe the tobacco dependence, the health damages and the tobacco components using different communication styles (funny, scientific, dramatic, comedians, shocking, and sad). Information on age, gender, smoking status of family and peers were gathered. Descriptive and univariate analysis of emotional and cognitive reactions to spots were performed with respect to gender, smoking status of adolescents, their peers and parents.

Results:

495 students were enrolled. 14% of them were current smokers. Two spots resulted to have most impressed the students: Sponge (29%) and Icons (18%). In the first spot the sponges represent human lungs, a pair of hands squeeze the tar from the sponge, revealing the cancer-producing tar that goes into the lungs of a pack-a-day smoker every year. The second one contrasts tobacco industry images such as a cowboy, a hip-hop DJ with a more accurate depiction of the repercussions of smoking: a dying man in a wheelchair who warns, ‘The reality is you can end up looking like this’. The reactions on these videos are disgust, reflection and sadness, respectively: Sponge 79%, 44% and 15%; Icons 60%, 3% and 20%. Univariate analysis showed differences by smoking status about video considered most impressive ($p = 0.02$) and by gender about the choice of spot in the role of the Minister of Health ($p < 0.001$).

Conclusions:

The spot media campaigns that gave a clear and scientific message or that changed the ‘‘icon’’ of the smoker were preferred by adolescents. Further research is needed to study adolescents’ responses and smoking outcomes obtained by different anti-tobacco mass media campaigns.

Key messages:

- The study demonstrates the preference of adolescents for spot giving clear scientific messages or using strategies that fight manipulation of the tobacco industry and aimed at changing smoker’s icon.
- The present study underlines that it is necessary to monitor the effect of a multimedia campaign and to examine its longitudinal impact, especially its impact on smoking behavior.

Participation of disadvantaged school age children (7-18) in health inequality projects

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The descriptive research was conducted in the period from September until December 2018 involving projects tackling health inequalities of children 8-17 years old. The sample included 10 projects funded by the Directorate General for Health and Consumer Protection from its 3rd Health Programme (2014-2020) listed on the Consumers, Health, Agriculture and Food Executive Agency website. The study methods involved desk review of 10 selected projects, 6 semi-structured questioners and 6 interviews. Data were analyzed according to 4 participatory principles: relationship building, storytelling, strategizing action and supporting organizational structures to support execution of these actions, as outlined in the Leadership, Organizing and Action: Leading Change course thought by the Harvard School of Public Health.

Results:

The preliminary finding is that none of the ten selected projects have identified children 7-18 years old as a primary target group. Majority of the projects (4 out of 6) involve sort of relationship building with children, while storytelling is used by a smaller number of projects (2 out of 10). All projects (6 out of 6) involve children just in the implementation phase focusing on educating children and none of them in the project design phase. Moreover, children covered by the implementation are mainly included through schools (8 out of 10) due to a missing parent consent for interacting with most disadvantaged children that are not in schools.

Conclusions:

There is a serious lack of awareness on the importance of meaningfully engaging disadvantaged children in health programming processes for decreasing existing health inequalities. Due to a significant lack of meaningful participation of disadvantaged children in majority projects tackling health inequalities of school-age children in Europe there is a serious risk of having these inequalities increased rather than overcome, despite significant financial and human investments.

Key messages:

- The most disadvantaged children should be meaningfully engaged in design, implementation and evaluation of health inequality projects that are of their immediate concern.
- There is a need for more in depth research on health inequalities faced by school age children (7-18) that are out of educational system.

Transition into secondary education and health-compromising behaviours: A longitudinal study

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Background:

We studied the associations of health-compromising behaviours with a transition into secondary education by following a large cohort of Finnish adolescents. Students with a direct (successful) transition into secondary education after the 9th grade (73%) and those with a late transition (7%) were compared.

Methods:

We analysed the following health behaviours in the 7th and 9th grades collected in school surveys in the Helsinki Metropolitan Area: late bed time, irregular breakfast pattern, tooth brushing less than twice a day, monthly alcohol consumption, smoking, regular energy drink consumption, physical activity level under recommendations, and excessive screen time, as well as clustering of these behaviours.

Results:

In logistics regression models (adjusted for gender, school), in the 7th grade all health-compromising behaviors except physical inactivity were related to the late transition, and in the 9th grade energy drink, smoking, breakfast, tooth brushing and screen time. In multivariate models (controlled for academic achievement, immigrant status, language spoken at home, and parents’ education) only bed time was independently associated in both grades. Bed time, breakfast, tooth brushing, alcohol, smoking, and energy drink formed three behavioral clusters -healthy, mixed, and unhealthy lifestyles. The last two predicted the late start in both grades; in multivariate models unhealthy only. Change in academic achievement over time, but not in lifestyle, predicted the transition.

Conclusions:

Students with unhealthy lifestyle are more likely to start secondary education later than those with healthy lifestyle meaning also postponing of their graduation and start of working life.

Key messages:

- The unhealthy lifestyle of those who start secondary education later than average, may be one of the mechanisms in the origin of socioeconomic health differences in later life.
- Healthy lifestyle as early as 13 years predicts successful educational paths.

Use of e-cigarettes by young people in Great Britain before and after Tobacco Products Directive

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Background:

Young people's experimentation with e-cigarettes has increased in recent years, although regular use remains rare. In May 2016, the EU Tobacco Products Directive (TPD) introduced regulations aimed in part at preventing use by young people. It imposed warnings on e-cigarette packets, banned many forms of advertising, and restricted nicotine strength. This paper examines change in young people's e-cigarette use after TPD, as well as complementary and alternative causal explanations for change, from young people's perspectives.

Methods:

Quantitative data sources were 2013, 2015 and 2017 School Health Research Network/Health Behaviour in School-aged Children surveys in Wales and 2014 and 2016 Smoking Drinking and Drug Use surveys in England. Data were analysed using segmented binary logistic regression in Wales, with simpler before and after analyses in England. Results were considered alongside qualitative interview data from young people aged 14-15 years in England, Wales and Scotland, collected in 2017 and 2018.

Results:

Ever-use of e-cigarettes almost doubled from 2013-15, though subsequent increases were smaller. In Wales, where pre-legislation time series data were available, under a range of assumptions, prior growth in e-cigarette ever-use did not continue post-TPD. Change in trend post-TPD did not reach significance (OR = 0.96; 95%CI = 0.91 to 1.01), but became significant after adjusting for change in smoking rates across the time-series (OR = 0.93; 95%CI = 0.88 to 0.98). Regular use did not increase significantly from 2015 to 2017 in Wales, although ever and regular use in England both increased from 2014 to 2016. Young people described limited interactions with core components of TPD, while commonly describing e-cigarette use as a fad which was beginning to run its course.

Conclusions:

Growth in youth experimentation with e-cigarettes may be slowing. Qualitative data from young people provide a range of explanations which appear largely unrelated to TPD itself.

Key messages:

- Survey data provide preliminary evidence that use of e-cigarettes may be plateauing among young people in the UK after a rapid initial increase in experimentation.
- Explanations position e-cigarettes as a passing fad which is beginning to lose its appeal in UK youth. Longer term monitoring of trends and perceptions remain vital.

Social network characteristics and alcohol use among young Swedes with different ethnic backgrounds

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Background:

The study explores how social network determinants relate to the prevalence and frequency of alcohol use of members of social networks. In a so-called dyadic design we study how similar alcohol habits co-exist among individuals (egos) and their peers (alters), when variables such as ethnic background, network composition, and other socio-cultural aspects are considered.

Methods:

The data were derived from a Swedish survey entitled ''Social Capital and Labor Market Integration: A Cohort Study.'' The study participants (egos; n = 1989) were around age 23 at the time of the interview. A so-called dyadic design was applied, which means that all components of the analysis refer to ego-alter pairs (n = 7828).

The outcome variable considered how alcohol prevalence and frequency of binge-drinking co-exist between egos and their alters. The independent variables also measured mutual attributes and behaviors - whether egos and alters were at the same age and sex, had same ethnic background, were relatives or friends, had similar religious affiliations, or intensely interacted with friends.

Results:

The analysis revealed that ego-alter similarity in terms of age, sex and ethnic background predict ego-alter similarity in alcohol use and binge-drinking. For example, if egos and alters shared a similar ethnic background, their risk of alcohol use was at least 30 percent higher as compared to those with different ethnic backgrounds. Relative to ego-alter pairs with mixed ethnic backgrounds, the odds of binge-drinking were highest for ego-alters pairs with Yugoslavian background (OR 1.76; 95% CI 1.27-2.42), followed by those with Iranian (OR 1.57; 1.04-2.35) and Swedish background (OR 1.28; 0.84-1.95).

Conclusions:

We conclude that network similarity (i.e., homophily) is an important explanation for the co-existence of alcohol use among members of peer networks. Alcohol use is more common in homogeneous peer dyads representing population groups with higher use.

Key messages:

- Peer similarity predicts alcohol use and binge drinking.
- Ethnic similarity of peers is associated with increased alcohol use and binge drinking.

2.G. Multiple chronic conditions: monitoring and care delivery

Implementing integrated care for multi-morbidity: analysis of experiences in 17 European programmes

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Background:

Many countries are experimenting with new models of care provision and numerous integrated care programmes have been established internationally. However, little information is available on how to implement integrated care. The aim is to provide more in-depth insights in the implementation of integrated care for developers and managers of integrated care programmes, policy makers, health insurers, and researchers.

Methods:

17 integrated care programmes addressing multi-morbidity were selected and studied in 8 European countries as part of the Horizon 2020-funded project SELFIE (Sustainable intEgrated care modeLs for multi-morbidity: delivery, FInancing and performancE). An overarching analysis with data extraction forms of the Thick Descriptions completed for all 17 programmes in combination with previous insights from the literature was applied. Information about the implementation of integrated care was extracted and coded according to the six components of the SELFIE framework: service delivery, leadership & governance, workforce, financing, technologies & medical products, and, information & research and sub-elements of each component at the micro, meso and macro level.

Results:

The results show the interrelatedness of the six SELFIE framework components and that alignment work between them, different elements and levels is important. The meso-level seems to be the driving force of implementation and that a stepwise approach to change by building upon what is already there (e.g. existing collaborative networks) and gradually expand and broaden the scope of the integrated care programmes was supportive.

Conclusions:

Implementation activities should simultaneously focus at the micro, meso and macro-levels at which integration occurs as they strongly influence each other. Alignment of the integrated care programme and the active influence of the macro-level context by creating an enabling environment facilitates successful implementation.

Key messages:

- Integrated care should be implemented with an incremental growth model rather than from a disruptive innovation approach.
- Integrated care should involve bottom-up and top-down implementation at different levels of the programme.

Monitoring of non-communicable diseases in Belgium

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Non-communicable diseases (NCDs) account for the highest share of deaths and burden of disease in Belgium. Nevertheless, there is currently no national plan to prevent and monitor the health impact of NCDs. Recently, two initiatives have been launched by Sciensano, the Belgian institute for health, providing new opportunities for monitoring NCDs in an integrated and comparable way - i.e., the Belgian Health Status Report (HSR) and the Belgian National Burden of Disease Study (BeBOD).

The HSR, launched in February 2019, integrates health status information in a continuously updated website: www.healthybelgium.be. Key indicators, identified through literature and stakeholder consultations, highlight specific needs and warning signals. Currently, the HSR integrates self-reported information on NCD prevalence from the Belgian Health Interview Surveys, with objective information on cancer and diabetes from the Belgian Cancer Registry and health insurance data, respectively. Future versions will include a broadened scope with national best estimates for other NCD groups.

The BeBOD study was launched in 2016, aiming to provide a first set of internally consistent burden estimates by 2020. BeBOD will complement the HSR by integrating information on morbidity and mortality of NCDs into a single measure of burden of disease - the Disability-Adjusted Life Year (DALY). DALYs quantify the number of healthy life years lost due to disease, and allow comparing the burden of fatal and non-fatal conditions. Annual updates of the BeBOD study will further provide unprecedented opportunities to monitor the impact of NCDs over time.

In addition to the new opportunities provided by the HSR and BeBOD study, NCD monitoring requires continued investment in active data collection and integration of available data sources. In term, these NCD monitoring systems will provide a solid basis for evaluating the impact of NCD control policies.

Key messages:

- There is currently no national plan to prevent and monitor the health impact of non-communicable diseases in Belgium.
- The Belgian Health Status Report and the Belgian National Burden of Disease Study provide new opportunities for monitoring non-communicable diseases in an integrated and comparable way.

Multimorbidity and quality of life: longitudinal analysis of the European SHARE database

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Multimorbidity defined most commonly as co-existence of 2+ diseases is one of the major challenges of an ageing society. It is often accompanied with declining quality of life (QoL). The study aims to 1) assess the relationship between increasing number of diseases and QoL over time, 2) explore the differences between several European countries. Longitudinal data analysis performed on the relevant waves (2004 to 2017) of the Survey of Health, Ageing and Retirement in Europe (SHARE). Data were collected every two years among participants aged 50+. Health conditions were identified through an open-end questionnaire containing 17 prelisted conditions. QoL was evaluated by Control, Autonomy, Self-Realization and Pleasure questionnaire (CASP-12v). Maximum QoL score, describing the best state was 48; minimum, 12 points. Association between increasing number of diseases and QoL is being assessed with multilevel analysis accounting for time and clustering within household and country. Minimum follow-up is 2 time points. Confounding variables include age, sex, socio-economic status, social support and health care parameters.

Preliminary findings show that 20 countries and 87,087 individuals participated in at least 2 waves; 80,041 answered CASP at least twice. Number of diseases when first reported was on average 1.65 (IQR = 0,2) and increased to 1.88 (IQR = 1,3) when last reported. Similarly, between first and last reported point QoL decreased on average by -0.32 (SD: ± 5.9); estimated by non-rescaled CASP scale. Greece showed the strongest decrease of -1.73 (SD: ± 6.36), while QoL increased in some countries, the most in Portugal for 0.76 (SD: ± 5.62). Our preliminary findings suggest high geographic variations in QoL, possibly driven by differential clustering of multimorbidity across Europe, design issues and other factors. This may underline the need for country-specific analysis and initiatives to address the growing burden of multimorbidity in our ageing populations.

Key messages:

- First longitudinal study to address this research questions across wide range of European countries using SHARE.
- Study accounts for large number of confounding factors owing to the abundance of collected information.

Personalized action plans for patients with multiple chronic diseases in Andalusia

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Issue/problem:

Complex chronic patients (CCPs) present multiple chronic conditions and complex healthcare needs. Comprehensive care by multiple healthcare professionals at different settings is required to improve their outcomes. This challenge is faced by the Andalusian Public Health System (APHS), responsible for the provision of healthcare and public health services to the entire Andalusian population (8.5 million inhabitants).

Description of the problem:

Almost 250000 CCPs have been identified within the APHS in 2018. The very complex ones (4%) utilise up to 30% of primary care and hospital resources.

The Comprehensive Healthcare Plan for Patients with Chronic Diseases was launched in 2012 to ensure the comprehensive care for these patients with a multidisciplinary response. Together with the Integrated Care Process Healthcare for Multimorbidity Patients, set the scene for implementing integrated healthcare with coordination of professional services and/or centres over time, helping to decrease clinical variability and improve quality of care.

Results:

Since 2016, Personalized Action Plans (PAPs) were introduced as key-elements to provide a holistic care coordinated at primary healthcare, including:

- taking patient's individual needs, preferences and own resources as a starting point for their evaluation and the development their PAPs,
- involving of patient's informal caregivers,
- involving all relevant care levels and health disciplines,
- ensuring the multidisciplinary care with a coordinating team.

Lessons:

PAPs are a key element in the healthcare process for CCPs, and the assessment of its implementation in Andalusia is contributing to generate evidence within the Joint Action on Chronic Diseases (CHRODIS+, www.chrodis.eu).

Key messages:

- PAPs implementation and assessment are crucial to better address CCPs health needs, facilitating a patient-centred healthcare approach, and contributing to a European model of care.
- Involving patient, family carers together with the professional team facilitates achieving better healthcare outcomes.

Distribution of Cancer cases and survival analysis results: A retrospective cohort study

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Background:

Cancer was the second leading cause of death in Turkey. The aim of this study is to examine the changes in the incidence of cancer cases and survival analysis in a region.

Methods:

This retrospective cohort study was carried out on data of 977 people had been diagnosed with cancer between the years 2013-2015 in Bingol province located in the east of Turkey. All cancer cases are included in the study. The data of the patients were obtained from the Ministry of Health Cancer Registry System and International Disease Classification Oncology (ICD-O) codes published by World Health Organization were used. Patients were evaluated topographically (tissue originating from the lesion) in 41 categories. Kruskal Wallis, Mann Whitney U test, Chi-square test and Cox regression analysis were used to analyze the data.

Results:

The mean age of the patients was 58.73 ± 16.80 (min: 1-max: 107). It was observed that 28.7% of the patients died during the follow-up period and 71.3% of the patients were alive. 30% of the cancer cases digestive system, 11% respiratory system, 23% female breast- genitalia, 15% blood-lymph-thyroid, 11.8% muscle-bone, 15,4% other cancer species. In men, lung, stomach, colon, prostate; breast, thyroid and skin cancers are more common in women respectively. The incidence rate for all age groups was 97 per hundred thousand in 2013, 161 per hundred thousand in 2015. The increase trend did not differ by gender. The mean follow-up period of the patients who died was 388 days and 1541 days for the living patients. The risk of death is increased significantly in patients who cannot be operated (RR = 2.779, HR = 3.048). In patients not receiving chemotherapy, the risk of death is reduced significantly (RR = 0.656, HR = 0.340).

Conclusions:

The incidence of cancer increases in the study area. Survival times vary according to treatment efficacy. Broad-based cohort studies evaluating the effects of treatment types on survival may be recommended.

Key messages:

- Cancer in the study area shows a significant increase from year to year.
- The average 5-year survival period of cancer patients was found is 71% as a good result.

Association between cancer and neurodegenerative disorders including dementias; a systematic review

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Background:

Several studies have examined associations between neurodegenerative disorders (ND) including dementia, and cancer. However, the associations and directions of these relationships vary by types of ND and cancer. In the current context of ageing populations and increased incidence of ND, dementia and cancer, and existing comorbidity between these disease groups, a better understanding of these relationships could, in future, inform prevention and therapeutics. This systematic review summarises the epidemiological evidence on these associations.

Methods:

PubMed, MEDLINE, Embase, Scopus and Web of Science were searched to identify relevant studies published by 31/12/2018. The search strategy included a combination of search and MESH terms related to ND (e.g. Alzheimer's, dementia), cancer and study design (case-control, cohort). The quality of included studies was assessed using the Newcastle-Ottawa scale (NOS).

Results:
77 studies were eligible for inclusion. The majority of studies scored 6+ on the NOS scale and some reported significant associations between ND and cancer. The association with specific types of cancer was not as evident as with all cancers. An inverse relationship was found between NDs and particularly Alzheimer's, Parkinson's, and Dementia and Cancer. Only one study found no association between Vascular Dementia and Cancer.

Conclusions:
The findings report an overall inverse association between NDs and all cancers but associations are less evident with specific cancer types. Results from this review can be helpful in recommending reporting standards for future research to reduce heterogeneity between studies.

Key messages:

- Exploring the intersection of neurodegenerative disorders/ dementia and cancer might help redirect research to novel therapeutic approaches.
- A standardised approach in design and outcome measurement is necessary to reduce heterogeneity across the studies.

Metabolic syndrome and renal cell cancer risk in Chinese males: a population-based prospective study

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Background:
Metabolic syndrome (MetS) is now a common public health problem. Few researches have reported the relationship between MetS and the risk of renal cell cancer (RCC). To investigate the association of metabolic syndrome and its components with the risk of RCC in Chinese males, the study was performed in the Kailuan male cohort, a large prospective cohort study.

Methods:
A total of 104,333 eligible males enrolled in the every 2-year health checkup were involved in the Kailuan male cohort study (2006-2015). Information on demographic and socioeconomic characteristics, lifestyle, medical history and laboratory tests at baseline entry was obtained. Univariable and multivariable Cox proportional hazards regression models were used to estimate the association between MetS and the RCC risk.

Results:
During a median follow-up of 8.9 years, 131 RCC cases were verified over a total of 824,211.96 person-years. Among the 5 single MetS components, hypertension (Systolic/diastolic blood pressure$\geq$130/85 mm Hg or antihypertensive drug treatment of previously hypertension) (HR = 2.35, 95%CI:1.48-3.72) and elevated triglyceride (TG) ($\geq$1.7mmol/L) (HR = 1.78, 95%CI:1.23-2.56) showed significant risk for RCC. Multivariate analysis showed that compared to those who did not meet MetS diagnostic criteria (number of abnormal MetS components<3), HR of RCC risk for participants with MetS was 1.95 (95% CI 1.35-2.83). The number of abnormal MetS components was linearly associated with an increased risk of RCC (P trend<0.001), and the HRs of RCC risk for males with 1, 2 and $\geq$3 MetS components were 1.27 (0.56-2.90), 2.42 (1.12-5.20) and 3.32 (1.56-7.07), respectively, compared with subjects without MetS components.

Conclusions:
MetS was inversely associated with of RCC risk in males.

Key messages:

- MetS might be one of the scientific and important predictors of RCC.
- Controlling metabolic syndrome may potentially have key scientific and clinical significance for RCC prevention.

Sugary drink consumption and cancer risk: results from NutriNet-Santé prospective cohort

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Background:
The objective was to assess the associations between the consumption of sugary drinks (sugar sweetened beverages and 100% fruit juices), artificially sweetened beverages and cancer risk.

Methods:
Overall, 101,257 participants aged $\geq$18y (mean age: 42.2) from the French NutriNet-Santé cohort (2009-2017) were included. Consumptions of sugary drinks and artificially sweetened beverages were assessed using repeated 24h-dietary records, designed to register participants' usual consumption for 3,300 different food and beverage items. Associations between beverage consumption and the risk of overall, breast, prostate and colorectal cancer were assessed by multi-adjusted Fine&Gray Hazard models, accounting for competing risks.

Results:
The consumption of sugary drinks was significantly associated with overall cancer risk (n = 2,193 cases, sHRfor a 100mL/d increase = 1.18, 95% confidence interval 1.10 to 1.27, P<.0001) and breast cancer risk (n = 693 cases, sHRfor a 100mL/d increase = 1.22, 95% confidence interval 1.07 to 1.39, P = 0.004). The consumption of artificially sweetened beverages was not associated with cancer risk. In specific sub-analyses, the consumption of 100% fruit juice was significantly associated with overall cancer risk (n = 2,193 cases, sHRfor a 100mL/d increase = 1.12, 95% confidence interval 1.03 to 1.23, P = 0.007).

Conclusions:
In this large prospective study, the consumption of sugary drinks was positively associated with overall and breast cancer risks. Of note, 100% fruit juices were also positively associated with overall cancer risk. These results need replication in other large-scale prospective studies. They suggest that sugary drinks, which are massively consumed in Western countries, may potentially represent a modifiable risk factor for cancer prevention.

Key messages:

- In this large prospective study (n = 101,257), the consumption of sugary drinks (including 100% fruit juice) was associated with an increase in overall and breast cancer risk.
- In specific sub-analyses, 100% fruit juices were also associated with an increased risk of overall cancers. The consumption of artificially sweetened beverages was not associated with cancer risk.

2.H. Health services and innovative technologies

Challenges in building image-based diagnostic support deep-learning algorithm for acute burns

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Background:

Acute burns are complex to diagnose and erroneous assessments impact on the victim's mortality and morbidity. Specialists operate from a small number of burns centres and the capacity to provide timely assistance to front line clinicians is therefore limited. Diagnostic assistance through artificial intelligence could be an option to provide a timely and equitable diagnosis. This project sheds light on the feasibility of the development of an artificial intelligence algorithm for assisted diagnosis of acute burns and clarifies challenges faced along the way.

Methods:

A bank of images has been built from a number of burn centres in South Africa and is continuously being updated (currently about 1200 images). Attempts have been made to train deep learning algorithms to diagnose the burn depth, an element that is challenging both at bedside and using image-based teleconsultation. We came across methodological challenges that need further consideration.

Results:

Some challenges are clinical, i.e. inherent to the complexity of burn diagnosis, and imply the need of having an accurate diagnosis for the burn images on which the algorithm is trained. Other challenges pertain to the actual development of an algorithm. Prior to identifying burn depth a complex task relates to the feasibility of finding the burn itself in images of varying body parts and backgrounds. Further, training an algorithm for diagnosing burn depth also requires, large numbers of varying cases, the accurate labelling of the wound area for training, and decisions to be made as regards the best outcome to train upon. Current preliminary results indicate satisfactory identification of the burn area and promising results with regards burn depth diagnosis.

Conclusions:

Development of artificial intelligence algorithms require strong collaborations and discussions between technical and clinical experts but are showing promising results.

Key messages:

- Development of clinical image-based automated diagnosis involve a number of critical challenges on both the technical and clinical sides that need to be addressed prior to optimization.
- Once optimally developed, deep learning algorithms are a potential solution to assist with the reduction of the burden of burns on the health services by providing timely, and cost-effective advice.

Evaluating a digital sepsis alert in a multi-site hospital: a natural experiment

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Background:

This study investigated the impact of a digital sepsis alert on patient outcomes in a busy London multi-site hospital. Sepsis is a serious illness and common cause of death, but rapid diagnosis and treatment improve patient outcomes. Digital health records allow algorithms to be embedded which 'alert' clinicians to patients who are at risk of developing sepsis. Despite the current promotion of 'digital health', evidence of the impact of algorithm driven alerts on patient outcomes is limited.

Methods:

A retrospective natural experiment utilising the phased introduction of a digital sepsis alert into a large, multi-site hospital in England. Silent alerts (not visible to clinicians) acted as controls. Outcome measures were in-hospital all-cause mortality within 30 days of the alert, extended hospital stay ($\geq$7 days) and timely antibiotics ($\leq$60 minutes of the alert). Inversely weighted multivariable logistic regression was used to determine associations between alert and patient outcomes.

Results:

In a sample of 21,183 inpatients, the mortality rate was 5.9%. The active, visible alert was associated with lower odds of death (Odds Ratio (OR):0.76; 95%CI:(0.70, 0.84)). In 9988 emergency department attendances ending in admission, 40.6% had an extended hospital stay and 41.5% received timely antibiotics. The active alert was associated with lower odds of extended hospital stay (OR:0.93; 95%CI:(0.88, 0.99)) and increased odds of receiving timely antibiotics (OR:1.71; 95%CI:(1.57, 1.87)).

Conclusions:

This study demonstrates that a move to digital health, through an automated sepsis alert, embedded in digital health records, was associated with improved health outcomes. Further work is needed to identify the causal pathway, which is likely to include more rapid treatment with antibiotics, and possible unintended consequences. These findings support the ongoing roll out of digital alerting and provide a model for robustly evaluating their impact.

Key messages:

- The introduction of an automated sepsis alert associated with the use of improvement methodology was associated with improved process measures and patient outcomes.
- Introduction of digital health interventions can, and should, be robustly evaluated with appropriate statistical approaches.

An automated diagnostic device for children under 5 years of age: A proof-of-concept study in Malawi

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Background:

Automated diagnostic device to measure child's vital sign is a global unmet demand. Having separate diagnostic devices to measure multiple vital signs is more expensive, and can be complex for health workers. An automated ''all-in-one'' device would help avoiding extra costs as well as maintenance challenges associated with multiple devices. In addition to improve classifying childhood illness, such an automated device would also increase adherence to guidelines, optimal use of antibiotics, and a reduction of unnecessary referrals.

Methods:

We studied an automated device in Malawi, which was designed to measure multiple key vital signs (SPO2, respiratory rate, temperature) among newborn, infant and children <5 years. The device collected photoplethysmogram (PPG) signals for SpO2 via a universal pediatric sensor, placed on child's finger. Temperature was measured via infra-red signal from child's forehead. Accelerometry measures respiratory rate, by placing the device around the child's belly. The CO2 sensor data together with video recordings of child's respiration offered the reference for child's respiration count.

Results:

Preliminary analyses of valid PPG signals, video annotated respiratory count and CO2 sensor data revealed the following key results:

- For SPO2, the performance of the target probe among 170 subjects appears extremely well with even the smallest and largest children.

- Among 145 subjects with valid CO2 data, 93 subjects were fully calm and had a regular breathing pattern. Comparing accelerometry measurements from 93 calm subjects with the reference data, the root of mean square error (RMSE) was only 1.18 respiration per minute (RPM). Excluding four outlier measurements from 145 subjects' dataset, the RMSE for the remaining 141 subjects was 1.76 RPM.

Conclusions:

This study results demonstrated the proof of concept that the device measures key vital signs among newborn, infants and children <5 years, using a reusable single-based probe.

Key messages:

- Automated diagnostic device measures key multiple key vital signs (SPO2, respiratory rate, temperature) among newborn, infant and children <5 years.
- Such an automated device may have potential to ensure accuracy in diagnosis, increasing adherence to recommended guidelines, optimizing use of antibiotics, and reducing unnecessary referrals.

Impact of deprivation on hospital efficiency and financial balance in paediatrics

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Background:

In healthcare systems where hospital tariffs are based on average national length of stay (LOS), deprived patients may be a source of inefficiency for hospitals as deprivation has been shown to be associated with increased LOS. They may also negatively impact hospitals' financial balance as few hospital payment methods include deprivation. Our objective was to study the impact of deprivation on hospital efficiency and financial balance.

Methods:

A study was carried out using an exhaustive national hospital discharge database. All inpatient stays in mainland France between 2012 and 2014 by children over 28 days and under 18 in hospitals with a paediatric ward were included. Deprivation was estimated with an ecological deprivation index divided into national quintiles. Efficiency was assessed by variations in patients' LOS compared to different mean national LOS (paediatric LOS, LOS of admissions for a similar condition...). Financial balance was assessed at the admission level through the ratio of production costs and revenues and at the hospital level with the difference between all revenues and production costs for said hospital. Multivariate models assessed the association between those indicators and deprivation.

Results:

4,124,510 inpatient stays were included. LOS was shorter than national means for less deprived patients and longer for the more deprived, and the difference was higher for diagnosis-related groups (DRGs) that included both adult and paediatric patients compared to paediatric-only DRGs. The multivariate model confirmed those significant associations. Deprivation also had a significant impact on hospitals' financial balance, especially for hospitals with a percentage of paediatric patients in the two most deprived quintiles between 20% and 60%.

Conclusions:

Measures to reform hospital payment methods must be encouraged to improve resource allocation efficiency and equity in access to good paediatric care.

Key messages:

- A reform of hospital funding to better account for deprivation is needed. A modulation of tariffs using an allocation key at the patient level must be considered to mitigate the effect of deprivation.
- DRGs specific to children should be encouraged to become the norm rather the exception to provide an adequate picture of resources used during admission and therefore an appropriate tariff.

The effect of an mhealth clinical decision-making support system on neonatal mortality in Ghana

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Background:

Mhealth interventions promise to bridge gaps in clinical care but documentation of their effectiveness is limited. We evaluated the utilization and effect of an mhealth clinical decision-making support intervention that aimed to improve neonatal mortality in Ghana by providing access to emergency neonatal protocols for frontline health workers.

Methods:

In the Eastern Region of Ghana, sixteen districts were randomized into two study arms (8 intervention and 8 control clusters) in a cluster-randomized controlled trial. Institutional neonatal mortality data were extracted from the District Health Information System-2 during an 18-month intervention period. We performed an intention-to-treat analysis and estimated the effect of the intervention on institutional neonatal mortality (primary outcome measure) using grouped binomial logistic regression with a random intercept per cluster. This trial is registered at ClinicalTrials.gov (NCT02468310).

Results:

There were 65,831 institutional deliveries and 348 institutional neonatal deaths during the study period. Overall, 47·3% of deliveries and 56·9% of neonatal deaths occurred in the intervention arm. During the intervention period, neonatal deaths increased from 4·5 to 6·4 deaths and, from 3·9 to 4·3 deaths per 1,000 deliveries in the intervention arm and control arm respectively. The odds of neonatal death was non-significantly higher in the intervention arm compared to the control arm (odds ratio 2·10; 95% CI (0·77;5·77); $p = 0·15$). The correlation between the number of protocol requests and the number of deliveries per intervention cluster was 0·71 ($p = 0·05$).

Conclusions:

Non-significant higher risk of neonatal death observed in intervention clusters may be due to problems with birth and death registration, unmeasured and unadjusted confounding, and unintended use of the intervention. The findings underpin the need for careful and rigorous evaluation of mhealth intervention implementation and effects.

Key messages:

- Supposedly effective interventions must be evaluated in context before they are scaled-up.
- Mechanisms influencing outcomes in context must be considered in the design and evaluation of interventions.

2.I. Workshop: Sharing best practices and building effective training at European points of entry

Organised by: Netherlands National Institute for Public Health and the Environment
Chair persons: Aura Timen - EUPHA (IDC), Christos Hadjichristodoulou - Greece
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Infectious diseases can spread all over the world due to the transportation of people and goods through ships, aircrafts and vehicles. During the transportation on board of conveyances (ships, aircrafts, trains, buses), diseases can spread from person-to-person, by infected food or water or through vectors. The same can happen when travelers pass through points of entry (PoE) such as: ports, airports and ground-crossings.

To properly prevent and respond to public health events at PoE, designated ports, airports and ground-crossings core capacities for PoE are dictated in the IHR (2005), which should be in place at all designated PoE. According to the World Health Organization Global Health Observatory data, the IHR core capacities implementation at designated PoE at the European WHO region is 64%. In order to support countries with this implementation, exchange among countries of effective, legalized practices in accordance with IHR (2005), the so-called best practices, can be of important help.

Besides the goal to improve mere capacity, professionals in charge of communicable diseases at PoE should be prepared to respond to public health events and prevent cross-border spread. Education, training and exercises are common ways to achieve this, but demand extensive expertise, time and financial means. As part of a EU Joint Action, a collective training program for designated PoE is being developed, to share efforts and resources, and to help countries better respond to public health events.

However, regarding this training, many questions are still unanswered. What is effective training for public health events at designated PoE, and what components and methodology should it contain. What are the specific training needs of these people? What competencies should they have? What can we learn from previous trainings and what are best practices for designated PoE? The aim of this workshop is to provide a step-by-step overview of all elements that are essential to improve capacity and develop and organize effective training program for event management at designated points of entry in Europe.

This study was funded by the European Union's Health Programme (2014-2020).

Key messages:

- Extensive and long-term evaluation of training and exercising regarding infectious disease control at points of entry is needed, in order to design effective trainings and facilitate core capacities.
- Collection and dissemination of best practices in infectious disease control at points of entry, facilitate the challenging task of IHR core capacity implementation.

Effective training in cross-border infection prevention and response

Doret de Rooij

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Introduction:

Competent personnel at points of entry is important to prevent international spreading of disease. Education, training and exercises (ETE) are commonly used to secure this competency. We studied what effective training looks like, by conducting a literature review on effective ETE, conducting a training needs assessment.

Methodology:

A systematic search in Embase, Medline, Web of Science, ERIC, Cinahl, and PsycInfo, to identify effective ETE on infectious disease control was performed. We integratively analysed effectiveness of ETE methods on different outcome levels: satisfaction, learning, behavior and organizational performance. Also, we assessed training needs and -preferences among professionals involved in infectious disease control at points of entry in Europe. They completed a digital questionnaire about previously received ETE, importance of topics, highest training needs, and their preferred ETE methodologies.

Results:

We identified a range of effective ETEs in 62 studies. However, details on specific ETE methodologies are scarce, thwarting to link effectiveness to methodology. Also, long term and high level outcomes like behavioral change or public health system performance are reported less frequently than mere satisfaction or knowledge change, while these former often have higher relevance in real practice. Respondents (n = 59) had highest training needs concerning handling ill or exposed persons, and design and use of the contingency plan. Training needs correlated with importance of topics. Highest preferred training methods were presentations and e-modules.

Conclusions:

We call for more extensive evaluations of education, training and exercises in infectious disease control, with measurement of high level outcomes and long term effects. Results from the current review and training needs from the field could be combined to design most effective ETE at points of entry.

Public health events in the maritime transport sector

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Introduction:

A literature review to describe evidence on communicable diseases affecting people on ships or at ports, from 1990 to 2013 was carried out. Also, a literature review on radiological and chemical events of public health relevance associated with ships or at ports, from 1940 to 2013 was performed.

Methodology:

Databases reviewed were: Medline, Scopus, Web of Science, Spanish Society of Maritime Medicine, and WebPages of WHO, The International Radio Medical Advice Centre, International Atomic Energy Agency, European Maritime Safety Agency, Marine Accident Investigation Branch, Spanish Nuclear Safety Council and the Major Accident Reporting System.

Results:

From 1990 to 2013, 196 outbreaks relating to ships or ports with more than 24,000 cases and 19 deaths were published. 59% of outbreaks (n = 116) were food- and waterborne, causing 82% (n = 19741) of cases and 12 deaths (11 deaths due to Legionella, case fatality ratio of 7%); almost a third was caused by norovirus. Respiratory diseases, mainly Influenza, caused 18% of outbreaks and 2 deaths. Thirteen radiological events were published that affected 500 persons and caused 47 deaths, 24 due to exposure to elevated levels of radiation. During the study period 94 chemical events were published, of which 69 events affected people and in the remaining events only a public health risk was present. These 69 chemical events generated almost 12,000 cases and more than 2,000 deaths. Thirty countries, including all EU Member States, Norway and Iceland, were requested to complete the questionnaires regarding identification of authorities and practices for management of radiological and chemical events.

Conclusions:

Food- and waterborne diseases are most reported; followed by respiratory diseases. Legionellosis accounted for the highest case fatality ratio. Tuberculosis was reported only on seafarers from cargo or fishing vessels and vaccine preventable diseases was mainly reported on crew members from cruise ships.

Best practices for core capacities at ports

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Introduction:

A survey was conducted in the frame of the EU HEALTHY GATEWAYS joint action with the purpose to identify best practices implemented at designated points of entry-ports of EU Member States for: core capacities implementation; detection, surveillance and management of public health events; vector surveillance and control practices at ports; contingency planning; risk communication; and inspection of ships for vectors.

Methodology:

A questionnaire was disseminated to the EU Member States designated partners of the joint action. ''Best practices'' were considered those which fulfilled the following four criteria: a) practices are implemented according to the International Health Regulations (2005) requirements for core capacities; b) practices are documented and legislated/formalised; c) staff have been trained in implementing the documented practices; d) practices have been tested with exercises or have been applied in real life events.

Results:

Data were collected from 15 ports of 13 countries including eight designated ports and one that that designation has not been completed. Best practices were described for medical services including diagnostic facilities, training programmes, exercise for testing contingency plans, staff competency frameworks, equipment and health measures implementation. Standard Operating Procedures and national legal frameworks were collected.

Conclusions:

Despite the progress that has been made in the IHR core capacities implementation, it seems that best practices exist based on the countries priorities and needs. There are not many examples of PoE implementing best practices in all areas of the survey. Achievement of core capacities is a continuing effort and exchange of best practices among EU MS can be beneficial.

Best practices and training for preparedness and response at airports

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Introduction:

Airports are important points of entry (PoE). More than 2.5 billion passengers pass through Europe's airports every year. The nature of airports provides manifold opportunities for interactions among persons from all over the world and their environment with the potential for exposure, transmission and spread of infectious disease. Therefore, training, preparedness and response (P&R) to public health risks and events at airports are of utmost importance. The EU Joint Action Healthy Gateways airports branch (HGair) aims to strengthen P&R at airports in a multidisciplinary way.

Methods:

Based on the international health regulations (IHR) and on previous research, HGair investigates P&R using a multimethod approach and offers a variety of training activities. A survey to identify best practices on IHR core capacities, event detection, surveillance, management and contingency planning at airports is being carried out. Training methods include face-to-face trainings on European, national and local level, tabletop and simulation exercises as well as web-based training.

Results:

Main results of HGair are best practice catalogues, a tool for contingency plan development and assessment at airports, a depository of P&R training materials and table top/simulation exercises, standardized operation procedures for vector control at airports and for inspection of aircrafts for vectors, a web-based platform and network of experts to communicate and notify rapidly in case of cross-border risks to health at airports and in air travel. So far, completed questionnaires (n = 14) on best practices in P&R were received from designated airports in 13 European countries, showing variations in reported practices.

Conclusions:

European airports report different P&R practices. Deliverables and results of HGair provide the opportunity to strengthen IHR core capacities at airports and to harmonize surveillance and management of cross-border health threats in the air travel sector.

2.K. Workshop: Predictors and developmental timing of mental health problems among sexual minority individuals

Organised by: EUPHA (SGMH)
Chair persons: Corina Lelutiu-Weinberger - USA, Richard Bränström - EUPHA (SGMH)
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As consistently shown across studies from various parts of the world, sexual minority individuals (e.g., those identifying as lesbian, gay, and bisexual [LGB]) are significantly at a higher risk for depression, anxiety, and suicidal thoughts and behavior when compared to heterosexuals.

The increased risk for poor mental health among sexual minority populations is believed to be a consequence of LGB individuals' increased exposure to specific social stressors related to navigating a stigmatized minority identity. Studies trying to explain health inequalities based on sexual orientation have mainly focused on so-called minority stress processes, such as discrimination, internalized homophobia, expectations of rejection, and stress of concealing one's sexual orientation.

This workshop will give examples of studies from various European countries on mental health predictors and trajectories by using various approaches such as population-based sampling, longitudinal data collection, and comprehensive theoretical frameworks. Dr. Gemma Lewis (University College

London, UK) will present results showing that sexual orientation-based disparities in mental health are present already in early adolescence and increase throughout the school years. Arjan van der Star (Karolinska Institutet, Sweden) will present population-based data suggesting that openness about sexual orientation is not directly linked to lower risk of depression among sexual minorities, but is instead dependent on access to social support. Conor Mahon (Dublin City University, Ireland) will present results showing minority stressors as predictors of social anxiety among sexual minority men. Associate professor John Pachankis (Yale University, USA) will present results showing that, in addition to increased exposure to social stressors, barriers to societal integration can partially explain the elevated risk of suicidality among sexual minorities.

Key messages:

- Sexual minorities are a higher risk of mental health problems, such as depression, social anxiety, and suicidality, as compared to heterosexuals and these disparities can be identified early in life.
- Sexual orientation-based mental health disparities seem to be based both on disproportionate stigma-related stress and a higher prevalence of general risk factors for poor mental health.

Depression and self-harm from adolescence to young adulthood in sexual minorities compared with heterosexuals in the UK: a population-based cohort study

Gemma Lewis

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Background:

There are few population-based cohort studies of the emergence, development, and persistence of mental health problems in sexual minorities compared with heterosexuals. We compared trajectories of depressive symptoms in sexual-minority adolescents and heterosexual adolescents from when they were aged 10 to 21 years, and examined self-harm at ages 16 and 21 years.

Methods:

The study included 4828 adolescents born between April 1, 1991, and Dec 31, 1992, from the Avon Longitudinal Study of Parents and Children birth cohort (Bristol, UK) who reported their sexual orientation when aged 16 years. Depressive symptoms were assessed with the short Mood and Feelings Questionnaire at seven timepoints between ages 10 and 21 years. A self-harm questionnaire was completed at ages 16 and 21 years. Analyses were linear multilevel models with growth curves (depressive symptoms), logistic multilevel models (self-harm in the previous year at ages 16 and 21 years), and multinomial regression (lifetime self-harm with and without suicidal intent at age 21 years).

Findings:

At age 10, depressive symptoms were higher in sexual minorities than in heterosexuals and increased with age to a larger extent. Depressive symptoms increased at each timepoint by 0·31 points in hetereosexuals, and by 0·49 points in sexual minorities. Sexual-minority adolescents were more likely than heterosexual adolescents to report self-harm in the previous year at ages 16 and 21 years, with no evidence that this estimate decreased with age. At aged 21, sexual minorities were more likely to report lifetime self-harm (ie, on at least one previous occasion) with suicidal intent than heterosexuals.

Interpretation:

Mental health disparities between heterosexuals and sexual minorities are present early in adolescence and increase throughout the school years, persisting to young adulthood. Prevention of these mental health problems and early intervention must be a priority.

Sexual orientation openness and depression symptoms: A population-based study

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Background:

Sexual minorities (e.g., lesbian, gay, and bisexual individuals) are at higher risk for depression than heterosexual individuals. Lack of openness about one's sexual orientation is a suggested source of these disparities, but it has been linked to both positive and negative mental health. Few population-based studies have explored the association between openness and depression, and potential mediators and moderators of this association, including social support and sexual orientation-based victimization.

Methods:

Swedish respondents to the 2014 wave of the European Health Interview Survey were used to identify a population-based sample of self-reported sexual minorities. All individuals reporting a nonheterosexual identity (and a matched sample of heterosexuals) were invited to participate in a follow-back study in 2016 (n = 320). A total of 191 (59.7%) individuals completed the survey, of whom 80 reported a gay, lesbian, bisexual, or other nonheterosexual identity.

Results:

This first nationally representative survey of sexual orientation openness showed that only about one third of the sample reported being completely open. We found no evidence of a direct association between openness and depression or a mediating effect of social support or victimization on this association. However, social support moderated this relationship, such that greater openness was linked to higher depression among sexual minorities reporting low levels of social support.

Conclusions:

Our study suggests that sexual orientation openness is not directly related to lower risk of depression among sexual minorities, but is instead dependent on access to social support. Sexual minorities might need social support for navigating the stress of open self-identification.

Minority stress, intra-minority stress and social anxiety: Examining an extended psychological mediation framework among sexual minority men

Conor Mahon

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Background:

Compared to their heterosexual counterparts, sexual minority men (SMM) are at an increased risk of social anxiety disorder. Distal (i.e., everyday discrimination) and proximal (i.e., internalised homophobia, rejection sensitivity, concealment of sexual orientation) minority stress processes are associated with heightened social anxiety for SMM. Stressors emerging from within the sexual minority male community, termed intra-minority stress, and psychological processes that may foster resilience (i.e., a sense of coherence, connectedness to the LGBT community) are less explored in this area. This study examined potential pathways between everyday discrimination, intra-minority stress, proximal minority stressors, resilience and social anxiety.

Methods:

Self-identified SMM (N = 255) residing in the Republic of Ireland completed an online survey containing measures of minority stress, intra-minority stress, resilience and social anxiety. Structural equation modelling was used to examine the model.

Results:

The model yielded a good fit to the data, X2(16) = 26.61, CFI = .99, TLI = .97, RMSEA = .05, and SRMR = .03. Rejection sensitivity and a sense of coherence had a significant indirect effect in the relationships between both exogenous variables (i.e., discrimination and intra-minority stress) and social anxiety. There were no significant pathways to social anxiety involving concealment of sexual orientation, internalised homophobia or LGBT community connectedness.

Conclusions:

For SMM, minority stress processes and intra-minority stress are important determinants of social anxiety. Our findings demonstrate that proximal minority stressors may operate differently in a social anxiety context for SMM in western European countries. A sense of coherence was an integral factor in the model and demonstrated the strongest association with social anxiety.

Untethered lives: Barriers to societal integration as predictors of the sexual orientation disparity in suicidality

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Background:

Despite increasing legal protections and supportive attitudes toward sexual minorities (e.g., those who identify as lesbian, gay, and bisexual [LGB]) in recent decades, suicidality remains more common among this population than among heterosexuals. While barriers to societal integration have been widely theorized as determinants of suicidality for the general population, they have not been comprehensively explored to explain the sexual orientation disparity in suicidality and/or compared to more established contributors.

Methods:

Data come from the cross-sectional Swedish National Public Health Survey, which randomly collected data from individuals (16-84 years of age) annually from 2010 to 2015 (1,281 (2.2%) self-identified as LGB). Analyses examined sexual orientation differences in suicidality (i.e., past-12-month ideation and attempts), and explored the role of barriers to societal integration (i.e., not living with a partner or children, unemployment, and lack of societal trust) in explaining this disparity over-and-above more commonly explored psychological (e.g., depression, substance use) and interpersonal (e.g., discrimination, victimization, lack of social support) suicidality risk factors.

Results:

Compared to heterosexuals, suicidal ideation and attempts were more common among both gay men/lesbians (AORideation: 2.51; AORattempts: 4.66), and bisexuals (AORideation: 3.76; AORattempts: 6.06). Barriers to societal integration mediated the association between sexual orientation and suicidality even in models adjusting for established risk factors for suicidality.

Conclusions:

The disproportionate barriers to societal integration that LGB individuals experience seem important contributors to the elevated risk of suicidality among sexual minorities. Preventive interventions should consider innovative ways to foster societal integration within sexual minority populations and to adjust hetero-centric social institutions to better include sexual minorities.

2.L. Determinants of frailty

Sex, age and socioeconomic inequalities in older people's unscheduled care

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Background:

In Scotland, unscheduled care is usually received at hospital accident and emergency (A&E) departments or referral by GPs to medical assessment units (MAU). Almost a quarter attendances are for those aged 65 years+. Demand for unscheduled care will increase as the population ages. This study measures inequalities in unscheduled care presentations among those aged 65 years+.

Methods:

A&E and MAU attendance data between April 2017 and March 2018 for Glasgow residents were analysed. Data were modelled using poisson modelling for outcome measures attendances, rate of attendance and length of stay, adjusting for agegroup, sex and deprivation. A second set of models also adjusted for time of day, month and referral source, including interaction terms.

Results:

While there was a higher number of attendances among females (RR and 95% CI = 0.30 (0.28, 0.32)), and among those aged 65-69 years compared with older ages (RR = 0.03 (0.01, 0.06)), modelling rates showed that males were significantly more likely to attend (RR = 0.14 (0.13, 0.16)) and that likelihood rose with age, eg RR for 85+ years significantly greater than 80-84 years, significantly greater than for 75-79 years etc. There was no gender difference in length of stay but this increased with increasing age. Attendance was significantly more likely for those living in the most deprived quintile of deprivation (RR = 0.30 (0.27, 0.34) compared with the most affluent quintile). SES inequalities in attendance and length of stay became less pronounced with increasing age. Referrals via 999 emergency services increased with age while referrals by GP and NHS24 reduced with age. Attendance was more likely in December (RR = 0.15 (0.11, 0.18)) and likelihood of a morning attendance reduced significantly with increasing age and deprivation.

Conclusions:

Inequalities in attendance, length of stay and methods of referral are observed which should be considered when planning to meet the demand for unscheduled care.

Key messages:

- Age, sex and socioeconomic inequalities in unscheduled care exist even at the oldest ages.
- When planning to meet the demand of future unscheduled care, patterns of current use and population projections should be considered in tandem.

Influence of Physical Activity, Protein Intake and Social Network on the Frailty development

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Background:

Frailty, a geriatric syndrome, is associated with many adverse health outcomes. Risk factors include physical inactivity, low protein intake and an inadequate social network. In this analysis we aimed to assess the influence of these factors and their combination in an 11-year-follow-up study on a Europe-wide level.

Methods:

The analysed dataset included 22,226 community-dwelling robust and prefrail persons aged ≥50 years (11 countries) from the Study on Health, Ageing and Retirement in Europe (SHARE). Frailty was measured with the "Frailty Instrument for Primary care of the Survey of Health, Ageing and Retirement in Europe". Additionally, self-reported level of vigorous physical activity (PA), protein intake and satisfaction with social network were assessed. The impact of these parameters on the development of frailty was calculated using Cox regressions, adjusted for age, education, smoking, alcohol BMI, depression, long-term illness and each other.

Results:

People who do not engage in PA, had a higher HRs for frailty development compared to people performing PA regularly [women: 1.62 (95%CI: 1.22-2.13); men: 1.83 (95%CI: 1.44-2.33)]. People with low protein intake did not have significant higher HR [women: 1.05 (95%CI: 0.80-1.37); men: 1.16 (95%CI: 0.93-1.46)]. Women with poor social network showed HRs of 1.34 (95%CI: 1.24-2.15)], men with poor social network had a HR of 0.88 (95%CI: 0.70-1.10). In general, we found that persons with a combination of two risk factors had a higher risk for frailty compared to those with no or only one. However, no significant synergy index could be found.

Conclusions:

Regular PA, but also adequate social networks seem to be important factors in frailty prevention.

Key messages:

- Sufficient PA and satisfaction with social network were shown as modifiable factors to prevent frailty in an 11-year-follow-up study.
- A combination of two risk factors was associated with a higher risk for frailty compared to one, however, with no significant synergy index.

Risk of fall among the hospitalized over-49 population. A retrospective cohort study in a hospital

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Background:

Despite the copious efforts made to prevent the problem, inpatient falls remain one of the most common adverse events in hospitals, with high risks in term of morbidity and mortality rates, as well as high costs for the healthcare system. This study aims to evaluate the inpatient falls incidence rate in a hospital in Rome, Italy.

Methods:

A retrospective cohort study has been set out based on data collected by a Risk Management Unit concerning the falls of patients over 49 years, which happened in the hospital between 1st July 2008 and 30th June 2013. Data collected from the incident report forms were inserted in a database and analyzed using the statistical program SPSS, 20.0 Illinois version.

Results:

During the period observed, 516 falls were reported. Patients who fell had a mean age of 68.8 years (SD ± 16.2). The falls are distributed for these age groups: 109 (21.1%) in 50-64; 129 (25%) in 65-74; 181 (35.1%) in 75-84; 97 (18.8%) in > 84. Fall incidence rate was calculated on the overall number of hospital admissions in the observed period (N = 35,812) (1.44 per 100 hospital admissions IC95% 1.32-1.56). Most of the patients were men (333; 64.5%) and older than 75 (53.9%). Inpatient falls were more frequent in the medicine wards (incidence rate 2.2 per 100 hospital admissions, IC95% 1.85-2.55,). The 51.6% of falls happened during the night shift. Severe outcome resulted in 13.6% of falls. Most of the falls (52.3%) happened within three days from the hospital admission. At multivariate analysis, a period of 2-3 days from hospital admission is the main risk factor to determine severe outcomes such as death or cranial trauma (p = 0.02; OR 2.87 IC95% 1.16-7.09).

Conclusions:

The study contributes to measure the phenomenon in older adults and age group 50-64, identifying a specific indicator to properly measure inpatient falls incidence rate in the elderly. The study gives indications on the main risk factors related to this adverse event and on prevention strategies.

Key messages:

- Falls in hospital is an important adverse event not only in the elderly.
- The first period of three days from the hospital admission constitutes the main risk factor for the falls.

The contribution of eHealth to improve fall and balance disorder care in the elderly

Luís Velez-Lapão

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Background:

The global ageing and consequent vulnerability for chronic multimorbidity, balance disturbances and falls represent a significant public health challenge that needs to be addressed. The use of Information Systems and Technologies to support eHealth services responding to balance disorders represents an opportunity to optimize health outcomes and insure autonomy support for older people.

Methods:

A systematic review was performed in accordance to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis statement (PRISMA) to describe the contribution of eHealth to balance disorders care of older adults. The search was limited to English language journals and to reports that were published in the last 5 years related to use of eHealth in the context of balance and fall, restricted to the population older than 60 years of age without functional limitation by neurological disease.

Results:

From a total of 1005 unduplicated articles, only 12 articles complied with the eligibility criteria. It was found a growing interest on the research but it was not possible to effectively compare the results of the studies. This can be explained due to diversity of older population engaged on the studies, differences in follow-up times, lack of homogeneity of study methodology and use of different remote technologies, yet to reach maturity. It was observed a gap between investigation and actual clinical use that should be addressed.

Conclusions:

The use of eHealth in the context of older people with fall risk due balance disorders represents an opportunity to be explored, reaching the fragile and growing elderly population. The patient, caregiver and health human resources engagement and the homogeneity on research are necessary keys to allow clinical applicability and alignment with health policies.

Key messages:

- The use of eHealth in the context of older people with fall risk due balance disorders represents an opportunity to be explored, reaching the fragile and growing elderly population.
- Homogeneity on research is necessary to allow clinical applicability and alignment with health policies.

Traumatic brain injury as a risk factor for dementia

Elisabetta Mezzalira

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Introduction:

The Centers for Disease Control and Prevention (CDC) reports that there were 2.87 million cases of traumatic brain injury (TBI) in the United States in 2014, 69 million worldwide. Some studies suggest a connection between TBI and increased risk of dementia, but it remains unclear whether the risk increases with age and TBI severity. Given our aging population, it is essential to better characterize the link between TBI and dementia.

Methods:

We conducted a retrospective cohort study of two major academic medical centers for years 2000-2015. We identified all patients with TBI, aged 45 and older. Variables included age, TBI severity, pre-existing dementia, dementia diagnosed after TBI, years to dementia, and follow-up time. TBI severity was determined by head/neck AIS score, using ICD-PIC software. Mild TBI was defined as AIS 0-2, and Moderate/Severe as AIS 3-6. Analysis was done in R.v.3.0.1 software.

Results:

Overall, there were 14,199 patients with TBI, of which 9,938 (70%) were mild and 4,261 (30%) were moderate/severe. Mean age was 70.5 (±14.0). There were 1,422 cases (10%) of pre-existing dementia, and 850 (6%) cases of dementia diagnosed after TBI. The mean follow-up time was 1,129 (±1,474) days.

The 75-84 age group had the highest incidence of TBI (28%). When compared by age group and TBI severity, the proportion of moderate/severe TBI increased with increasing age. The proportion of pre-existing dementia increased with age, as expected. Notably, there is increased incidence of dementia after TBI in patients aged 65 and older (7-10%, $p < 0.001$). There was no observed effect of TBI severity on the risk of dementia after TBI.

Conclusions:

Our results indicate that TBI is a risk factor for the development of dementia, especially in patients aged 65 and older. Given the global public health burden of these two diseases it is critical to develop effective TBI primary prevention strategies.

Key messages:

- TBI is a risk factor for the development of dementia.
- Need for public health measures to mitigate the risk of TBI in the patient population 65 and older.

2.M. Obesity and diabetes: preventing disease

Body mass index and mortality in relation to age and follow-up of 30 years in large Austrian cohorts

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Background:

Obesity and its health consequences will dominate health care systems in many countries during the next decades. Prevention programs have been implemented. However, the optimum body mass index (BMI) in relation to all-cause mortality on population level is still a matter of debate.

Material and Method:

Data 1/1989-6/2005 of the Vorarlberg Health Monitoring & Prevention Program (VHM&PP,) and 8/2005-12/2015 for Vorarlberg provided by the Main Association of Austrian Social Security Institutions were analyzed. In both cohorts, information was available on age, sex, measured height and weight as well as the date and cause of death. Generalized additive models were used to model the mortality rate as function of calendar time, age and follow-up.

Results:

The VHM&PP cohort consisted of 85,488 men and 99,873 women and the later of 129,817 men and 152,399 women. In the second cohort, men (mean age 48 (SD16.9) vs. 45.3 (SD 15.5) and women (48.3 (SD 17.7) vs. 45.6 (SD 16.6) years) were slightly older than in the VHM&PP cohort. The average BMI was slightly higher in men (26.1 (SD4.0) vs. 25.7 (SD3.8) kg/m2) but not in women (24.6 (SD 4.8) vs. 24.7 (SD 4.9) kg/m2), respectively. In the VHM&PP cohort more ever smokers were found in both men (40.3 vs. 22.4%) and women (24.8 vs. 18.4%) than in the subsequent cohort.

BMI optimum increased slightly between 1985 and 2015, from 24.9 (95%-CI: 24.0-25.9) to 26.4 (25.3-27.3) in men and from 22.4 (21.8-23.1) to 23.3 (22.5-24.5) kg/m2 in women. However, age and follow-up had major impact on the increase. In younger age the associations are quite stable, while in men over 50 years and in women over 60 years the BMI optimum decreased with length of follow-up.

Conclusions:

Overall the BMI optimum increased slightly over time. However, age and follow-up had major impact on the association. These results suggest, that prognosis of obesity related diseases has improved over time. To detangle this further research is necessary.

Key messages:

- In Austria the BMI optimum increased slightly over time.
- Age and follow-up time had major impact on the association.

Association between psychosocial stress and obesity among migrant and non-migrant Ghanaians

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Background:

Psychosocial stress is associated with obesity in some populations, but it is unclear whether the association is related to migration.

Aim:

This study explored associations between psychosocial stress and obesity among Ghanaian migrants in Europe and non-migrant Ghanaians in Ghana.

Methods:

Cross-sectional data from the RODAM study were used, including 5898 Ghanaians residing in Germany, the UK, the Netherlands, rural Ghana, and urban Ghana. Perceived discrimination, negative life events and stress at work or at home were examined in relation to body mass index (BMI) and waist circumference (WC). Linear regression analyses were performed separately for migrants and non-migrants stratified by sex.

Results:

Perceived discrimination was not associated with BMI and WC in both migrants and non-migrants. However, negative life events were positively associated with BMI ($\beta = 0.78$, 95% CI, 0.34 to 1.22) and WC ($\beta = 1.96$, 95% CI, 0.79 to 3.12) among male Ghanaian migrants. Among non-migrant Ghanaians, in contrast, stress at work or at home was inversely associated with BMI and WC in both males (β = -0.66, 95% CI, -1.03 to -0.28; β = -1.71 95% CI, -2.69 to -0.73, respectively) and females (β = -0.81, 95% CI, -1.20 to -0.42; β = -1.46, 95% CI, -2.30 to -0.61, respectively).

Conclusions:

Negative life events are associated with increased body weight among Ghanaians in European settings, whereas stress at work or at home is associated with reduced body weight among Ghanaians in Ghana. More work is needed to understand the underlying factors driving these differential associations in order to assist prevention efforts.

Key messages:

- Negative life events are associated with increased body weight among Ghanaians in European settings, whereas stress at work or at home is associated with reduced body weight among Ghanaians in Ghana.
- More work is needed to understand the underlying factors driving these differential associations in order to assist prevention efforts.

A National Digital Diabetes Prevention Programme: Feasible, acceptable and effective?

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Background:

Type 2 Diabetes (T2DM) is a global public health priority affecting 425 million adults with 352 million more at risk of developing T2DM. Intensive group programmes focusing on weight loss and physical activity can prevent or postpone the development of T2DM, but certain groups (e.g working age) find it difficult to attend sessions. Digital options offer a flexible alternative with the potential to widen access and increase uptake. The National Health Service of England (NHSE) has initiated a pilot of a national digital Diabetes Prevention Programme (DPP) to determine its feasibility, acceptability and impact. This is the first national digital DPP in the world, and lessons learnt will be of interest internationally.

Methods:

Single arm, pre-post design located in 9 geographic areas with a total population of 5.6 million adults. Adults identified in primary care as being at risk of T2DM were referred to a digital diabetes prevention intervention (DDPI). Baseline data included demographic details (age, gender, ethnicity, highest level of education achieved) and clinical data (weight (kg), Body Mass Index (BMI) and glycated haemoglobin (HbA1c mmol/mol)). Clinical data were collected at baseline, 6 and 12 months, with the primary outcome change in HbA1c at 12 months.

Results:

The programme was effectively implemented in all 9 areas with a total of 5,053 referrals. 3,228 (64%) of those referred registered with a DDPI. Mean baseline values for registered patients was BMI 31.1, Weight 87.7 kg and HbA1c 43.4 mmol/mol. To date, 2,687 patients have reached the 6 month point, of whom 867 dropped out. Mean (95% CI) HbA1c change was -1.6 (-1.8 to -1.4) mmol/mol (n = 1,264) and mean (95% CI) weight change was -4 (-4.3 to -3.7) kg (n = 1,184).

Conclusions:

A national digital DPP is feasible, acceptable to patients and healthcare providers, and appears to be associated with beneficial impacts on HbA1c and weight in those who participate.

Key messages:

- A digital DPP is feasible, acceptable and associated with reductions in weight and HbA1c amongst participants.
- A digital DPP could be a useful part of a public health strategy to combat T2DM.

Association between detection of non-diabetic hyperglycaemia and vascular complications

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Background:

The benefit of screening for non-diabetic hyperglycaemia (NDH) is still debated. Furthermore, the associated risk of vascular complications following a diagnosis of Type 2 diabetes (T2D) in people previously detected as NDH in real-world settings is not known. We examined the presence of vascular disease in newly diagnosed T2D individuals by glycaemic status within 3 years of diagnosis.

Methods:

We identified 159,736 individuals diagnosed with T2D from the Clinical Practice Research Database in England between 2004 and 2017. We used logistic regression models to compare presence of microvascular (retinopathy and nephropathy) and macrovascular (coronary artery events, cerebrovascular and peripheral arterial disease) disease at the time of T2D diagnosis by prior glycaemic status. Models were adjusted for age, sex, ethnicity, deprivation, smoking status, blood pressure, cholesterol, and number of primary care visits.

Results:

There was a strong association between baseline glycaemic status and presence of microvascular complications at diabetes diagnosis (normoglycaemia 30.7%, no glycaemic test 36.7%, NDH 42.4%). Similarly, prevalence of macrovascular disease was lower for those with normoglycaemia(26.9%) compared with NDH(29.8%). Compared with individuals with normoglycaemia, those detected with NDH before the diagnosis of T2D had 76% and 53% increased odds of retinopathy and any microvascular complications (AOR 1.76, 95%CI 1.69-1.85; AOR 1.53, 95%CI 1.41-1.65), and 7% higher odds of diagnosis of acute coronary events (OR 1.07, 95%CI 1.03-1.12) at time of diagnosis of T2D.

Conclusions:

Microvascular and macrovascular diseases are detected in 40 and 20% of newly diagnosed T2D. NDH before the diagnosis of T2D was more likely associated with microvascular complications and acute coronary events. Detection of NDH might represent opportunities for reducing the burden of microvascular disease through heightened attention to screening for microvascular complications.

Key messages:

- Detection of non-diabetic hyperglycaemia before the diagnosis of Type 2 diabetes was more likely associated with microvascular complications and acute coronary events.
- Detection of non-diabetic hyperglycaemia might represent opportunities for reducing the burden of microvascular disease through heightened attention to screening for microvascular complications.

2.N. Skills building seminar: How to Advocate Scientific Evidence to Decision-makers?

2.N. How to Advocate Scientific Evidence to Decision-makers?

Organised by: EUPHAnxt, Global Health Next Generation Network, EUPHA (PHPP)
Chair persons: Viveka Guzman - Ireland, Keitly Mensah - France
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Public health research aims to change the world, or at least contribute to the development of healthier and more equitable societies. However, the availability of health information does not inherently lead to its increased use in policy and decision-making. Significant gap remains between the knowledge of public health researchers and the actions taken by decision-makers. Various tools and mechanisms can help to increase the use of scientific evidence in policy development by making policymakers appreciate, understand and incorporate such scientific information into policy decisions. As part of this process, it is crucial that researchers and public health practitioners acquire the ability to translate their knowledge and become skilled on communicating the evidence effectively.

To this aim, we will present firstly a WHO approach for that on the basis of EVIPNet Europe. Member countries have benefited of EVIPNet Europe's capacity building efforts, its training workshops, coaching and mentoring schemes, leading to increased knowledge and skills in view of identifying, accessing, appraising, synthesizing and communicating the best available evidence. The presentation will focus on the ways to trigger tangible changes at policy and legislative levels.

The second presentation will give more specific information about the process of real-life applications. Main question will be ''How to advocate scientific evidence to decision-makers in the frame of evidence-informed policy-making?''. The presentation will help the participants to analyze to whom they are targeting, what their interests are and how to communicate scientific information to a decision-maker effectively.

Last but not least, common challenges of evidence-informed policy-making process in health care and ways to tackle them will be presented. By doing so, special attention will be paid to the methodologies for joint fact-finding, responsive evaluation and citizen science.

The workshop will engage participants interactively and leave time for answering their questions at the end.

Key messages:

- Public health professionals can influence health policies, if they learn strategies in communicating scientific evidence to decision-makers effectively.
- Providing correct skills to researchers when communicating about and advocating for the scientific evidence with policy-makers will enhance the impact of evidence on policy making.

WHO Approach

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Despite considerable investments into the generation of research worldwide, research is frequently not used in practice or policy. A substantial body of evidence is showing that using research requires significant and planned change at individual, organizational and systems levels.

To support and guide WHO Member States in the endeavor of strengthening evidence-informed policy-making, the WHO Regional Office for Europe launched the Evidence-informed Policy Network (EVIPNet) Europe at the end of 2012. It is a capacity building initiative that aims to create, train, guide and institutionalize innovative, multisectoral and multidisciplinary partnerships and teams at the country level. Assisted by EVIPNet Europe, these teams initiate and implement national research-to-policy processes, such as developing user-friendly evidence briefs for policy on high-priority policy issues targeted and tailored to policy-makers, holding policy dialogues, and creating linkages and exchange between the research and policy communities.

In this presentation, an overview of EVIPNet Europe's mandate, approaches, tools and activities will be given. Participants will gain an understanding of how knowledge brokering and integrated, interactive mechanisms can help to bridge the gap between research and policy and improve health outcomes.

Strategies and practical examples

Tugce Schmitt

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Various tools and mechanisms can help to increase the use of scientific evidence in policy development by making policy-makers appreciate, understand and incorporate such scientific information into policy decisions. As part of this process, it is crucial that researchers and public health practitioners acquire the ability to translate their knowledge and become skilled on communicating the evidence effectively.

The European Observatory on Health Systems and Policies supports and promotes evidence-based health policy-making through comprehensive and rigorous analysis of the dynamics of health-care systems in Europe. It engages directly with policy-makers and experts, and works in partnership with research centers, governments and international organizations to analyze health systems and policy trends.

In this presentation, concrete strategies will be given for advocating scientific evidence. The focus will lie particularly on the process of real-life applications of evidence-informed policy-making. By this way, it will help the participants to analyze to whom they are targeting, what are their interests and how to communicate scientific information to a decision-maker effectively based on specific examples from the European Observatory on Health Systems and Policies.

Tackling the challenges

Marleen Bekker

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In this presentation, information about common challenges of evidence-informed policy-making process in health care and ways to tackle them will be given to the participants. By doing so, special attention will be paid to the methodologies for joint fact-finding, responsive evaluation and citizen science.

2.O. Workshop: Climate change and the impact on public and occupational health

Organised by: Academic Collaborative Centre Environment and Health
Chair persons: Peter Van Den Hazel - EUPHA (ENV), Moniek Zuurbier - Netherlands
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Objectives:

Climate change has an impact on people's physical, mental, and community health. This impact can arise directly and indirectly. Some natural disasters are exacerbated by climate change, like floods, heat waves, storms, wildfires, and landslides. Some effects occur more gradually for example from changing temperatures. Heat waves can weaken the infrastructure (transport, construction) and make food systems less secure (infections, less access). But heat waves can also directly cause severe health effects. Heat waves are examples of direct and indirect climate impacts on society's physical and mental health. Climate change creates visible impacts in many countries. The number of heat waves increased across the globe the last few decades. This change has an impact on communities' health both in private life settings as in occupational settings. There is an overlap of impact which influences the effects seen in both settings. The awareness of this overlap is not clear for most stakeholders. Health advisories before, during and after heat waves do not consider this issues in their health promotion activities.

This workshop aims at describing different ways how public health could benefit of a more integrative approach of health promotion by linking messages directed at the general public and the occupational work force. Therefore, examples on national as well as regional and local level are presented discussed with specific emphasis on requirements and processes for success on one hand and obstacles on the other. The examples reflect different European regions and country heat waves plans as well as results from the EU-funded projects HEATSHIELD and SCORCH.

Key messages:

- Heat will be an increasing issue in public health.
- Health advisories need to be improved during periods of heat.

Occupational health effects during periods with heat

Moniek Zuurbier

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Hydration status, awareness and the attitude to health and performance effects of preventing dehydration was evaluated in five industries across Europe. The prevalence of dehydration was assessed via analyses of urine samples from 139 workers and questionnaires collected from employers as well as employees collected from ten different work places. In total 80 % of all workers were either suboptimal hydrated at the onset of work or became dehydrated during their work shift with levels equal to or higher than those associated with impaired function in cognitively dominated tasks and complex motor function. The high prevalence of dehydration is in conflict with ~75% of all workers that emphasize drinking as the most important mitigation strategy during periods with elevated heat strain. Also, work safety and prevention of negative health effect was stressed as very important both by employers and employees (average score 9 out of 10). Although, hydration is emphasized by work-safety advisories, it seems clear that more effective 24/7 hydration strategies are warranted. We propose that future protection of workers against detrimental effects of heat should consider personalized alerts that can integrate the importance of timing to facilitate the development of appropriate hydration habits that accounts for the large inter-individual variation in sweating and hence differences in water and electrolyte needs.

Preventing heat stroke and heat illness on the workplace: a study on knowledge, attitudes and practices of safety representatives from Northern Italy (2016-2017)

Matteo Riccò

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Introduction:

Heatwaves (HWs) and rising environmental temperatures are significant health threats also for workplaces. This study will investigate knowledge, attitude and practices towards heat-related health issues in a sample of safety representatives from Northern Italy (SRs).

Methods:

A cross-sectional questionnaire survey was conducted in 2016-2017 among 327 SRs. Knowledge status was measured both in general and focusing on first-aid issues. Assessment of risk perception included severity and frequency of heat-related events. Multivariate logistic regression analysis assessed individual and work-related characteristics associated with SRs' risk perception.

Results:

258 questionnaires were retrieved (participation rate 78.9%; mean age 48.2±25.2 years). Knowledge status was relatively good on technical/preventive issues (62.3%%±16.8) and first aid measures (67.1%±25.2), but a large share of respondents ignored the risk from exertional heat stroke (35.7%), and for heat strokes elicited by non-environmental heat (e.g. machineries, use of protective equipment, etc. 47.7%). The majority of respondents acknowledged the high frequency of HW events (90.7%), but only 44.6% agreed on their potential health threat. had received A specific first-aid formation was reported by 49.2% of respondents, while 10.9% had any previous interaction with heat-related disorders. Specific countermeasures had been put in place by parent company in 3.9% of cases. Eventually, previous participation to formation courses was associated with higher risk perception regarding severity and frequency of HW (OR 3.18 95%CI 1.40-7.23, OR 5.54 95%CI 1.59-19.23 respectively), while previous interaction with heat-related disorders apparently raised the perceived severity of heat-related health risk (OR 3.92 95%I 1.10-13.14).

Conclusions:

Although SRs exhibited a fairly good understanding of heat-related health issues on the workplaces, our findings also suggest the need to enforce specific countermeasures.

The role of youth in the climate change debate

Peter Van Den Hazel

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The impacts of climate change are not distributed equally. Some people will experience natural disasters first hand, some will be affected more gradually over time, and some will experience only indirect impacts. There are data from the United nations that show the interest of youth on climate change. Close to half a million youth around the world have taken action on climate change through SGP [small grants programmes] projects in their homes, schools and communities. (UNDP, 2015). 84% of the surveyed young people agree that they need more information to prevent climate change. (UNEP, 2011). Furthermore, about 73% of surveyed youth say they currently feel the effects climate change. (UNEP, GlobeScan Survey, 2008). Some 89% of youth respondents say young people can make a difference on climate change. [UNEP, 2008]. But only 9% of youth are very confident the world will act quickly enough to address climate change. [UNEP, 2008]. Young people are key actors in raising awareness, running educational programmes, promoting sustainable lifestyles, conserving nature, supporting renewable energy, adopting environmentally-friendly practices and implementing adaptation and mitigation projects[UNFCCC]. Action by youth, as protest school strikes or speeches to the UN by Greta Thunberg, urge immediate action from governments, business leaders and school leaders. There are different reasons for this action by youth. The psycho-social impacts of a changing climate are generally under lighted in these reasons. Are the responses by society enough to minimize suffering and promote resilience of youth in the face of the challenging impacts of climate change? Or do governments and businesses enough while they increasingly seem to be moving toward action on climate change, as they proclaim to cut their own emissions or be active in their energy transition? It is not clear whether those actions are enough to satisfy the next generation of customers, employees and decision makers.

The health impact of heat waves in Europe: insights from national plans and key informant interviews

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In Europe, heat waves and extreme heat are known to cause an increase in morbidity and mortality. Moreover, climate change is expected to increase the number and intensity of heat waves, particularly in urban areas. In order to limit the negative health impact of heat waves, many European countries have developed heat health plans.

The SCORCH project has reviewed the national heat plans of 20 European countries. In addition, face-to-face interviews were conducted in 9 countries, involving key stakeholders who partake in the development, implementation and/or diffusion of the plans.

Combined, the national plans and interviews provide insights in the different types of warning systems, the scales of implementation, the stakeholders involved and their responsibilities and the vulnerable populations that are targeted. Moreover, we are able to evaluate the processes outlined in the national plans, and identify certain strengths and weaknesses. These results will support the development of heat wave plans for countries that currently do not have such plans yet.

2.P. Population health metrics and innovative data sources

Slowing improvements in life expectancy across European Economic Area countries

John Ford

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Background:

Life expectancy improvements have slowed down in several European countries since around 2011. The relative contributions from changes in specific conditions (e.g. cancers) and broader risk factors (e.g. smoking or austerity) remain unclear. We aimed to explore the different potential causes in 17 European Economic Area (EEA) countries.

Methods:

We compared Global Burden of Disease (GBD) study estimates for life expectancy, years of life lost (YLLs) and population attributable fractions (PAFs) for risk factors, for 2005-2011 and 2011-2017 for 17 EEA countries. Three countries with the largest absolute improvements and three with the smallest were selected for analysis by gender, age, condition and risk factors.

Results:

Norway, France and Belgium had the largest improvement in life expectancy (+1.5, +1.2 and +1.2 years respectively) from 2011 to 2017, and Germany, Iceland and the UK the smallest (+0.1, +0.2 and +0.2 years). Life expectancy reduced slightly for women aged over 80 in Germany and UK, men aged over 50 in Germany, and for men in all age groups up to 90 years in Iceland. Norway, France and Belgium saw faster improvements in YLLs from lung cancer and Norway and France for COPD in both men and women, and from self-harm in men, after 2011 than before. PAF for tobacco declined faster after 2011. Germany, Iceland and the UK saw slower improvements in cardiovascular disease and in Germany and the UK lung cancer. In Iceland, YLLs for cancers, self harm, respiratory disease, cirrhosis and dementia all worsened after 2011. PAF for tobacco remained high or declined less after 2011 in all 3 countries. PAFs for alcohol and drug use remained high in Iceland and UK.

Conclusions:

Differential changes in major fatal diseases and risk factors help explain national changes in life expectancies, but national differences in data availability may affect results. Further research is needed into the 'causes of the causes', such as the 2008 economic crash in Iceland.

Key messages:

- Differential changes in major fatal diseases and risk factors help explain national changes in life expectancies.
- Norway, France and Belgium had the largest improvement in life expectancy from 2011 to 2017, and Germany, Iceland and the UK the smallest.

Disease burden in the Nordic region. Results from the Global Burden of Disease Study 2017 (GBD 2017)

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Background:

The Nordic countries - Norway, Sweden, Finland, Iceland, Denmark - combine liberal and open-market economies with public welfare and universal health services. As separate countries with differences in culture and lifestyle, important health differences may exist between them. The aim of this study was to compare life expectancy and disease burden by causes and risk factors in the Nordic countries, including Greenland as constituent country under Denmark.

Methods:

Age-standardised overall, cause-, and risk factor-specific estimates of disability-adjusted life-years (DALYs), along with life expectancy, were analysed in the Global Burden of Diseases, Injuries and Risk Factors Study 2017 (GBD 2017). Sex and country specific estimates were compared with Nordic regional estimates.

Results:

Males and females in Denmark (males: 78.8 years, 95% uncertainty interval 78.1-79.5; females: 82.7 years, 81.9-83.4), and males in Finland (78.6 years, 77.8-79.2) had lower life expectancy than the other countries. The lowest life expectancy and highest DALY rates were found among males and females in Greenland. Variation in DALY rates between the countries was primarily due to differences in mortality-related causes, including ischaemic heart disease, chronic obstructive pulmonary disease, lung cancer, alcohol use disorder, and self-harm. These causes dominated male DALYs. There was little country-wise variation in DALYs due to non-fatal diseases, which were dominant causes among females. Smoking and metabolic risk factors were important risk factors across countries, but contributed most to DALYs among males and females in Denmark, and males in Finland (alcohol use only).

Conclusions:

The GBD framework facilitates within-region comparisons for benchmarking exercises and can guide policy development. The comparison of disease burden in the Nordic countries illustrates how differences in risk factors may drive life expectancy and disease burden differences in high-income settings.

Key messages:

- Diseases and injuries associated with mortality are important causes of disease burden among males, while non-fatal diseases dominates disease burden among females in the Nordic region.
- Risk factors differences may drive disease burden differences between the Nordic countries.

People with a disability status in the French claim database: which characteristics and diseases?

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Background:

Due to a lack of data, populations with disabilities have been poorly studied. Here, we described the characteristics and diseases of people receiving a financial support for a disability and compared them to the general population.

Methods:

We extracted data of all health insurance general scheme beneficiaries (87% of the French population) 20-64 years of age in 2016 from the national health database, including information on adult disability allowance (ADA) and disability pension (DP). Diseases were identified using algorithms mainly based on ICD-10 diagnoses from hospital stays, long-term diseases information and specific medications. The proportion of patients with a given disease was compared between people with ADA or DP or without a disability status using relative risks adjusted for age and sex (aRR), estimated by Poisson regression.

Results:

Among 32.5 million people, 770,566 (2.5%) had an ADA (mean age 47, 49% women) and 733,599 (2.4%) a DP (mean age 53, 55% women). Disability status was associated with a higher proportion for all studied diseases, with high aRR found for mental illness (ADA: 44.8% (aRR: 17); DP: 26.5% (aRR: 8.9) versus 2.5% in those without disability status), in particular mental retardation (aRR: 108 and 4.7 respectively), neurologic or degenerative diseases (ADA: 13.5% (aRR: 16); DP: 9.0% (aRR: 9.8) versus 0.8% in those without disability status), in particular paraplegia (aRR: 36 and 25), but also cancers, diabetes and chronic and acute cardiovascular diseases.

Conclusions:

About 5% of French health insurance beneficiaries 20-64 years old received a financial support for a disability in 2016. All studied diseases were more frequent in this population than in those without a disability status. These results are useful to inform public authorities on health status of these populations and to implement public health policies targeting these populations with special healthcare needs.

Key messages:

- High frequency of diseases, including mental illness and neurodegenerative diseases, but also a large panel of other diseases was observed in people with a financial support for a disability.
- Public health policies targeting people with a disability should account for the large spectrum of diseases in these patients.

Compared to whom? Reference groups in socio-economic comparisons and self-reported health

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Background:

The association between socio-economic position and health is believed to be mediated, in part, by psycho-social comparison of one's situation to that of others. But with who? Possibilities include family, friends, elites, or even those in other countries or in previous times. So far, there has been almost no research on whether the reference point matters.

Methods:

We take advantage of a comparative data set that, uniquely, allows us to ask this question. The Life in Transition Survey was conducted in four Southern European and 30 Central and Eastern European and Eurasian countries. We sought differences in the probability of good self-reported health among those using different reference groups, including own family, friends and neighbours, domestic elites, people living in other countries and, those living prior to the major politico-economic transition. We used multivariable and multilevel mixed-effects Poisson regressions and estimated treatment effects via the regression adjustment of Poisson models.

Results:

In most cases the choice of reference group did not matter but in some it did. Among men in Eastern European and Eurasian societies, those who compared themselves to their parents and their own families before the start of transition were less likely to report good health compared to those who did not compare their own economic situation with any specific reference group.

Conclusions:

For some individuals, the choice of who to compare one's situation with does seem to matter, pointing to an area for future investigation in research on psycho-social determinants of health.

Key messages:

- We found no difference in self-reported health between those who compare their situation with friends and neighbours, domestic elites, and people living in other countries.
- In post-communist countries, those who compared their situation to that of their parents and their own situation before the politico-economic transition were less likely to report good health.

Neurodevelopmental multimorbidity and educational outcomes of 766,244 Scottish schoolchildren

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Background:

Neurodevelopmental conditions commonly co-exist in children but, in comparison with adults, childhood multimorbidity has attracted less attention in research and clinical practice.

Methods:

Record linkage of five Scotland-wide databases produced a cohort of 766,244 children attending Scottish schools between 2009 and 2013. Autistic spectrum disorder (ASD) and intellectual disabilities were ascertained from records of special educational need in the annual Pupil Census and attention deficit hyperactivity disorder (ADHD) and depression through relevant encashed prescriptions.

Results:

Neurodevelopmental multimorbidity ($\geq$2 conditions) was identified in 4,789 (0·6%) children; with ASD and ADHD the most common combination. Multimorbidity was associated with significantly increased risk of school absenteeism (adjusted IRR 1·23, 95% CI 1·20-1·28), school exclusion (adjusted IRR 3·04, 95% CI 2·74-3·38), low attainment (adjusted OR 12·07, 95% CI 9·15-15·94) and unemployment (adjusted OR 2·11, 95% CI 1·83-2·45) with clear dose relationships evident between number of conditions (0, 1, $\geq$2) and the last three outcomes. The associations with multimorbidity were stronger in girls than boys. Co-existence of depression was the strongest driver of absenteeism and co-existence of ADHD the strongest driver of exclusion. Low attainment and unemployment were, in part, mediated by absence and attainment respectively, and were not driven by specific conditions but rather multimorbidity from any cause.

Conclusions:

Structuring clinical practice and training around single conditions may disadvantage children with multimorbidity who are at significantly increased risk of adverse outcomes if their complex needs are not recognised and managed.

Key messages:

- Neurodevelopmental multimorbidity can have significant impacts on children's education.
- A holistic healthcare approach is needed to reduce the address their needs and reduce the risk of adverse outcomes.

2.Q. Risk of disability pension and morbidity

Do poor health behaviors have an impact on the transition from sick leave to disability pension?

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Background:

High age, being a woman, and having low socioeconomic status are among the important risk factors for transitioning from sickness absence (SA) to disability pension (DP). But, little is known about the effect of poor health behaviors, although there are indications that poor health behaviors increase the risk of both SA and DP. The aims were to study the associations between three poor health behaviors (current smoking, high alcohol consumption and low physical activity levels) and DP among individuals who recently been sickness absent, and to explore whether having multiple poor health behaviors increased the risk of transitioning from SA to DP.

Methods:

This prospective cohort study included 1991 twin individuals aged 20-46 who participated in a survey in 2005 and who had been on long-term SA in the two years preceding baseline (date of answering the survey) data collection of health behaviors (smoking, alcohol and physical activity) and relevant covariates. The participants were followed up for incident all-cause DP until the 31st of December 2012 (mean follow-up 5.2 years). National register data of SA and DP were used, and the association between each health behavior and DP was estimated using Cox proportional hazards regression analyses. The results are presented as Hazard Ratios (HR) with 95% Confidence Intervals (CI).

Results:

Results showed that compared to never smoking, current smoking was associated with a higher risk of transitioning from SA to DP (HR 1.76, 95%CI 1.08-2.84). Alcohol use, lack of physical activity or having several poor health behaviors showed no significant associations.

Conclusions:

Being a current smoker influences the risk of transitioning from SA to DP. Poor health behaviors are well established risk factors for poor physical and mental health. Hence, from a public health perspective it is important to emphasize the value of improving health behaviors in general but also among people with a history of SA.

Key messages:

- Many factors including health behaviors influence the risk of transitioning from sickness absence to permanent work incapacity in terms of disability pension.
- Supporting people on sickness absence to improve their health behaviors, e.g. smoking cessation, could be a promising approach to prevent exit from the labor market through disability pension.

Job control and risk of disability pension in the nationwide Danish Work Life Course Cohort

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Background:

A large number of studies have found job control to be consistently associated with an increased risk of disability pension. However, most previous studies have measured job control by self-report, introducing possible reporting bias inflating the risk estimates. Furthermore, previous studies have not accounted for the potential selection of individuals with pre-existing risk factors for disability pensioning into low control jobs.

Methods:

We analyzed data from the nationwide register-based Danish Work Life Course Cohort (DAWCO; n = 960,562 with approx. 6 million person-years). We measured job control annually by a job exposure matrix, based on a scale of five self-reported items from The Danish Work Environment Cohort Study, and disability pension using registers on public transfer payments. To account for potential selection into occupations with lower levels of job control, we included numerous life course confounders, including parental socioeconomic position and psychiatric and somatic diagnoses.

Results:

Employees in jobs with lower levels of job control had increased risk of disability pensioning. The association attenuated after adjustment for confounders but was not explained by selection into job groups with lower levels of job control (hazard ratio: 1.16 (95% CI: 1.03-1.31).

Conclusions:

Our findings suggest that lower levels of job control are associated with an increased risk of disability pension, and that this association is explained by neither reporting bias nor a selection of individuals with an increased risk of disability pensioning into job groups with lower levels of job control.

Key messages:

- Lower levels of job control appear associated with an increased risk of disability pension independent of life course confounders.
- Further research is needed on preventive measures in occupations with low levels of job control.

Socioeconomic consequences for adults with atrial septal defect: A register based follow-up study

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Background:

Atrial Septal Defect (ASD) is considered one of the most benign defects among congenital heart disease. The very good short and midterm outcomes after closure in the recent decades has led to believe that the ASD population is almost comparable to the background population after treatment. However, recent studies indicate that these patients are much more affected by their disease than first assumed. In this nationwide cohort study, we report the first long-term follow-up of use of permanent social security benefits and work participation in adults with ASD.

Methods:

All Danish patients born before 1994 and diagnosed with ASD between 1959-2013 (n = 2,277) were identified from the Danish registries. A comparison cohort was created using the Danish Civil Registration System, matching every verified ASD patient with 10 persons from the general population on gender and birth year. We used Cox proportional hazards regression to compare the risk of receiving permanent social security benefits in the ASD patients compared with the matched cohort. Using the DREAM database we calculated the proportion of patients and controls not working at the age of 30 years.

Results:

ASD patients had a higher risk of receiving permanent social security benefits (hazard ratio 2.3 (95% confidence interval 2.1-2.6)) compared with the comparison cohort; 24% of the ASD patients was receiving permanent social security benefits at the end of follow up compared with 12% of the comparison cohort. At the age of 30 years, the proportion not working was 28% in the ASD cohort and 18% in the comparison cohort. Of patients not working 23% had a psychiatric diagnose compared to 6.8% of the controls.

Conclusions:

The risk of receiving permanent social security benefits was twice as high in patients with ASD and the work participation was reduced compared with the background population.

Key messages:

- The poor affiliation to the work force and high prevalence of psychiatric morbidity is worrying.
- It demands for an increased psychosocial support by professionals caring for patients with ASD.

Copenhagen Burnout Inventory On A National Representative Sample Of Pre-School Teachers

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Background:

Pre-school teachers are faced with work-related stress and are at increased risk of development of burnout syndrome. The aim of this study was to evaluate the reliability of the Serbian version of Copenhagen burnout inventory (CBI) on a National Representative Sample of preschool teachers in Serbia.

Methods:

This was a cross-sectional study conducted between October 2018 and April 2019 which included 456 preschool teachers in Serbia. The instrument contained questions on socio-demographic, socio-economic characteristics, lifestyle characteristics, workplace environment and Serbian version of CBI. Univariate linear regression, multiple linear regression, Cronbach alpha coefficients were performed.

Results:

Cronbach alpha of three domains of CBI were: personal burnout-0.907, work-related burnout-0.878, client-related burnout- 0.903. Multiple linear regression analysis showed that having a tenured contract (ß = 3.46, p = 0.04), working in shifts (ß = 7.94, p = 0.01), and having worse self-perceived health status (ß = -8.88, p = 0.01) were significantly associated with personal burnout. Working in shifts (ß = -4.67, p-0.012) and having worse self-perceived health status (ß = -7.82, $p < 0.001$) were significantly associated with work-related burnout. Age (ß = 0.53, $p < 0.001$), living in urban areas (ß = -6.55, p = 0.015), alcohol consumption (ß = 5.09, p = 0.016), number of children teacher work with (ß0.407, p = 0.005), having teaching equipment (ß = -4.46, p = 0.033), and having worse self-perceived health status (ß = -7.17, $p < 0.0001$) were significantly associated with client-related burnout.

Conclusions:

CBI is a valid instrument for the assessment of burnout among preschool teachers in Serbia. Many workplace-related factors, which could be subject of preventive measures, are associated with domains of burnout in this population.

Key messages:

- Workplace-related factors are associated with burnout among preschool teachers in Serbia.
- CBI is valid instrument for assessment of burnout among preschool teachers.

Earnings among people with multiple sclerosis in Sweden, by education and occupation

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Background:

Multiple sclerosis (MS) may affect the individual's working life. We aimed to 1) investigate the mean levels and distributions of earnings among people with MS (PwMS) before and after MS diagnosis compared to people without an MS diagnosis, and whether such differences in earnings were associated with educational level or occupation and 2) assess the prevalence of sickness absence (SA) and disability pension (DP).

Methods:

Population-based cohort study (10 years prior to 5 years after MS diagnosis) using microdata linked from nationwide Swedish registers of all individuals aged 30-54 with MS diagnosed in 2003-2006 ($n = 2553$) and references without MS ($n = 7584$) randomly selected by stratified matching (sex and age). Annual mean earnings, by educational level and type of occupation, were compared with t-tests. Tobit regressions investigated the associations of earnings with individual characteristics. Lastly, the proportions on SA and DP, stratified by educational level and type of occupation, were examined in the diagnosis year and 5 years later.

Results:

Differences in earnings between PwMS and references were observed beginning one year prior to diagnosis and increased with time. PwMS had lower mean earnings for the diagnosis year (difference = SEK 28,000, p-value$<$0.05), and the difference had more than doubled (p-value$<$0.05) 5 years later. These differences remained after taking educational level and type of occupation into account. PwMS with university education and/or more qualified occupations had mean earnings most like their respective references'. PwMS had higher prevalence of SA and DP than the references, in both the diagnosis year and 5 years later.

Conclusions:

Earnings of people with MS were lower than references' already one year before diagnosis, and the gap increased thereafter. Results indicate that educational level and type of occupation are of importance for earnings. Moreover, SA and DP were more common among people with MS.

Key messages:

- Our results indicate that working-aged people with MS have less earnings than references already one year before diagnosis and that thereafter this gap in earnings increases with time.
- Education and occupation were influential in explaining the people with MS' heterogeneous earnings, with a hierarchal ordering of who maintained similar earnings to their respective peers.

Implementation of health promotion activities in mental health care in Denmark

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Background:

People suffering from serious mental illness face a high risk of lifestyle-related health problems, and higher mortality and morbidity rates than the rest of the population. The solution to the problem has been to integrate health promotion initiatives in mental health care. In Denmark psychiatric departments have implemented a new strategy and mental health nurses are now asked to screen for risk factors. The aim of this study is to explore how mental health nurses experience working with the screening of risk factors amongst patients with mental illnesses as part of their health promotion activities.

Methods:

We employed a qualitative research design using an interactive approach. Two focus group interviews ($n = 7$; $n = 5$) were conducted with mental health nurses attending a mental health specialist training in Denmark in 2018. The interviews lasted 1 ½ hours, were recorded and transcribed verbatim. Data were organized using NVivo 12 software and a qualitative content analysis was used to describe experiences in a conceptual form.

Results:

The implementation of health promotion activities in mental health care created two different types of dilemmas for the mental health nurses: 1) dilemmas related to health promotion that involved discrepancies between patients' autonomy and wishes, and the health promotion activities that were offered; 2) system-related dilemmas originated from structural factors and working with screening for risk factors. The mental health nurses developed various strategies and found new solutions to navigate these dilemmas.

Conclusions:

Mental health nurses found it challenging to implement health promotion activities in mental health care, although they generally found these activities meaningful. They developed new strategies to overcome the dilemmas.

Key messages:

- Health promotion initiatives need to be adapted to mental health nurses' existing mental healthcare practices in order for them to be meaningful.
- Screening of risk factors is insufficient as a health promotion activity in mental health care.

RT Accidents mortality in Italy: a population-based study in Piedmont on Vulnerable Road Users

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Background:

Among the largest Italian Regions, Piedmont (Northern Italy) had in 2017 a crude rate of road traffic accidents (RTA) deaths greater than the national average. RTA injuries remain a leading cause of injury deaths in Italy. Among them in both Piedmont and Italy many victims are vulnerable road users (VRU): pedestrians, cyclists and users of motorcycles or motorpeds. The study was aimed to describe their mechanisms of injury.

Methods:

Observational study of the resident population in Piedmont from 2003 to 2015. Transportation Injuries (ICD-10: V01-V99) were considered, because of their greater comparability rate in bridge coding studies. A number of 5,185 RTA deaths was observed. Role, type of vehicle of the victim and collision were studied.

Results:

Piedmont in 2017 had a RTA mortality rate (6.35 deaths per 100,000 inhabitants) greater than Italy (IRR = 1.13, 95% CI: 1.00 - 1.29; $p < 0.02$), 48.4% of the victims were VRU similarly to national data (49.8%). In the period the proportion of VRU on RTA deaths steadily increased from 25.6% in 2003 to 49.1% in 2015, in a significant way ($z = 2.79$; $p = 0.005$), because in a context of marked reduction of RTA mortality (-54.5%), the regional trend for VRU shows only a slight decrease (-12,6%). The VRU were: pedestrians (47.0%), motorized two-wheels users (37.4%) and cyclists (15.6%). Among pedestrians 63.9%

deaths were caused by collisions with mainly automobiles (82.1%) and heavy vehicles (12.7%). In case of collision the prevalent causes of death were head injuries (41.5%) and multi-trauma (31.8%). Similar patterns were observed for cyclists, while in motorcyclists 56.5% of deaths were due to loss of control or fixed object.

Conclusions:

VRU injuries remain a public health and social concern. Yet despite their extent, this problem is still not adequately considered in public health prevention programs. The observed mechanisms of injury evidence the importance to enhance the protection of VRU in road traffic circulation.

Key messages:

- In Italy, vulnerable road users are becoming a major group among road traffic injury deaths, because they not follow the general trend of large decrease of RTA injuries.
- Largest VRU group are pedestrians such as cyclists they are hit by cars or heavy vehicles with major trauma, in the motorized two-wheels loss of control and collision with fixed object are important.

3.A. Round table: Re-thinking health inequalities

Organised by: Erasmus MC, Rotterdam
Chair persons: Johannes Siegrist - Germany
Contact: j.mackenbach@erasmusmc.nl

Health inequalities - systematically higher rates of morbidity and mortality among people with a lower socioeconomic position - have been on the public health agenda for decades now. However, despite massive research efforts (and somewhat less massive policy efforts) health inequalities have not narrowed - on the contrary, relative inequalities have widened considerably. It is therefore time for a re-think: after decades of research we need to step back and ask ourselves: what went wrong?

Johan Mackenbach argues, in a book published by Oxford University Press (2019), that the main problem is that public health researchers and policy-makers have misunderstood the nature of health inequalities. They have too often ignored insights from other disciplines, such as economics (which has a stricter attitude to issues of causality) and sociology (which has a subtler understanding the nature of social inequality). They have also failed to integrate contradictory research findings into mainstream thinking.

This workshop will focus on three such contradictions, and will discuss whether it is possible to re-think health inequalities in a way that will allow more effective policy approaches. (1) It has been surprisingly difficult to find convincing scientific evidence for a causal effect of socioeconomic disadvantage on health. Should public health reconsider its idea that health inequalities are caused by social inequalities, and widen their scope to give more room to social selection, genetic factors and other non-causal pathways in their analysis?

(2) There is not a single country in Europe where over the past decades health inequalities, as measured on a relative scale, have narrowed. This is due to the fact that all groups have improved their health, but higher socioeconomic groups have improved more. This is even true in the only European country (i.e., England) in which the government has pursued a large-scale policy program to reduce health inequalities. Should public health accept that reducing relative inequalities in health is impossible, and focus on reducing absolute health inequalities instead?

(3) The Nordic countries, which have been more successful than other European countries in reducing inequalities in material living conditions, do not have smaller health inequalities. It is as if inequalities in other factors, such as psychosocial and behavioural factors, in these countries have filled the gap left by reduced inequalities in material living conditions. Should public health reconsider its idea that material living conditions are the foundation for health, and re-focus on psychological, cultural and other less tangible factors instead?

In this round table Johan Mackenbach will present and illustrate these contradictions and propose his answers to these contentious issues. Then, the four panelists will present their view-points, followed by a general discussion between panelists and the audience.

Key messages:

- After four decades of research into health inequalities, it is necessary to step back and ask ourselves why it has so far been impossible to reduce health inequalities.
- More effective policies to tackle health inequalities will only be possible when public health has come to grips with contradictory research findings.

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3.B. Workshop: The Effects of Shared Accommodations on Refugee Health in Germany: An Interdisciplinary Approach

Organised by: School of Public Health, Bielefeld University, Germany
Chair persons: Alexander Krämer - Germany, Kerstin Schmidt - Germany
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The importance of the relationship between health and migration has been recognised for a long time with a more recent focus on refugee health. The experience of life threatening situations in countries of origin, the flight itself, but also the legal status of a refugee in the destination country brings about many health-related challenges. One area, in which these challenges become particularly visible, is the housing situation of refugees. In contrast to many voluntary migrants, refugees are often required to live in shared accommodations. These can be flats but also buildings constructed for other purposes, such as old factories, gyms, or hotels, container buildings, or tents. Thus, the living conditions of refugees in destination countries are often below the average housing standard of the native population. This situation can on the one hand reinforce challenges to refugees’ physical, psychological and social health, and on the other hand it can hinder the good provision of healthcare at home. This workshop addresses these challenges for the case of Germany - which had the highest number of asylum applications between 2015 and 2017 - by analysing different aspects of refugee health from an interdisciplinary perspective. The contributions bring together the results from theoretical/philosophical reflections, as well as qualitative and quantitative empirical data, including the perspective of refugees and health care providers. The contributions raise questions about the characteristics of accommodations that affect the subjective well-being and health of refugees. The results show that there are particular challenges for health and healthcare provision related to the general situation of accommodation of refugees in Germany. These include the potential transmission of germs and related risks for the physical health of refugees, the creation of a situation of exclusion from society which can worsen psychological stressors, as well as the distance from worshipping places, which can hinder the beneficial effects of communities of faith for the social health of refugees. In addition, the possibilities of maternity care in shared accommodations are often limited due to the lack of privacy, which can represent a stressor for pregnant women and young families.

The results presented in this workshop are the outcomes of some projects developed in the graduate school ‘‘Challenges and Opportunities of Global Refugee Migration for Healthcare in Germany - FlüGe’’. FlüGe encompasses 12 doctoral students, supervised by 12 professors from five faculties at Bielefeld University. It covers a broad range of disciplines (public health, psychology, microbiology, theology, and law) with an active involvement of practice partners, such as clinical and governmental institutions. In taking this approach, the graduate school aims to identify the short-, medium-, and long-term challenges and opportunities posed to global migration for healthcare in Germany and seeks to develop practical solutions.

Key messages:

- Despite the diversity in refugee accommodation in Germany, shared housing in general negatively affects refugee health in various ways.
- The accommodation of refugees poses challenges to the physical, mental and social health of refugees and to the efficient provision of healthcare at home.

Housing facilities for asylum seekers in Germany: Ethical concerns regarding social exclusion, othering and negative effects on health

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Background:

Asylum seekers face many barriers in accessing health care and their well-being is impaired in manifold ways. According to Public Health research the impact on health of social determinants is much higher than the influence of access to health care. Therefore, it is important to take other living conditions like accommodation into serious consideration.

Methods:

The focus will be on how housing conditions allow or prevent opportunities for social participation and autonomy. As a philosophical-ethical paper this contribution attempts to identify moral concerns and ethical questions regarding housing situations under the lens of inclusion and exclusion. This will lead to the question whether they constitute forms of othering. In a first step it will be clarified how inclusion and exclusion are used as analytic frame, particularly whether and how far they are not only descriptive terms but also normative ones. Exemplary cases of housing facilities for asylum seekers in Germany will be given and questioned regarding practices of inclusion and exclusion and how this affects participation and autonomy.

Conclusions:

Apart from contributing to barriers in accessing health care different types of ‘‘exclusive’’ housing for asylum seekers often impedes on social participation and disempowers autonomous choices. Since social exclusion is known to affect (mental) health this raises concerns for health and well-being as well as several other ethical questions.

Questions for further discussion:

What is the responsibility of Public Health regarding the housing conditions of asylum seekers and the negative effects of othering on health?

How do we perceive this in the light of solidarity?

The impact of the housing situation on the health-related quality of life of refugees located in North Rhine-Westfalia, Germany

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Background:

In 2015 and 2016, more than one million people fled to Germany from war-affected countries - mainly from Syria, Afghanistan and Iraq. Nevertheless, little is known about health-promoting and health-damaging living conditions in refugees located in Germany. Strengthening healthy living conditions could be a measure to increase health-related quality of life (HRQoL) of refugees.

Methods:

The analyses were based on data from the FlüGe Health Study. The study was conducted in the period from February to November 2018 and included interviews and examinations. Participants were recruited from shared (n = 182) and private accommodation (n = 144) in several cities in North Rhine-Westphalia in Germany. The effect of housing situation on health-related quality of life as estimated from a modified version of the SF-12 questionnaire was examined using univariable analyses.

Results:

Three hundred and nine participants ranging in age from 18 to 75 years (Mean 32.4, SD 0.61) gave complete replies. The majority was males (73.0%) and more than half of the respondents (58,4%) were in a partnership. Univariate analysis showed no statistically significant difference in HRQoL scores among participants from shared and private accommodation in physical scale (Mean 51.7, SD 10.05 vs. 49.7, SD 10.88; p = 0.096) and mental scale (Mean 41.9, SD 14.7 vs. 44.3, SD 14.2; p = 0.134).

Conclusions:

From the data it appears that refugees living in shared and private accommodation in Germany have HRQoL scores indicating a relatively moderate HRQoL in physical scale and low HRQoL in mental scale compared to the German population.

The Impact of Refugee Women’s Accommodation on Maternal Health Care Provision

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Background:

About 1/3 of the persons seeking asylum in Germany are female. The majority of all refugee women in Germany are currently of childbearing age. The maternity period requires specialized care. Maternal health care professionals monitor the physiological processes of maternity and the psychosocial well-being in order to allow an uncomplicated transition to maternity. On arriving in Germany there are different types of accommodation for refugee women: 1) shared reception centers (e.g. tents, containerbuildings, gyms), 2) collective shelters for particularly vulnerable refugees and 3) private apartments. Depending on the woman's accommodation maternal health care professionals are confronted with different situations and conditions in providing care for these women. The aim is to analyze the impact of refugee women's accommodation on maternal health care provision and professional's actions.

Methods:

Structured expert interviews were conducted with maternal health care professionals. The interviews were analyzed following the standards of qualitative thematic analysis with a special focus on refugee women's accommodation and its impact on maternal health care provision.

Results:

The accommodation situation does impact the provision of maternal health care as well as the actions and doings of maternal health care professionals. On the one hand there is a change in tasks, which are no subject to original maternal health care, such as organizing transportation. On the other hand there are challenges in actually executing particular maternal health care actions, such as taking the medical history or performing examinations where there is no or little privacy.

Conclusions:

Accommodation conditions impact maternal health care provision in various ways. Therefore an enhancement of housing for refugee women may improve maternal health care provision and therefore maternal health for refugee women.

Antibiotic resistances of S. aureus in refugee accommodations – an investigation from the microbiological perspective

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Background:

Antimicrobial resistance (AMR) has been added to the list of the "Ten threats to global health" of the WHO. Due to varying rates of AMR persistence in the different countries of the world, there is concern that migration might foster the burden of antibiotic resistance in Europe. As calculated before, prevalence of AMR is elevated in refugees. Refugees are supposed to have higher risk for AMR prevalence, constituted by the conditions in the European host countries and the countries of origin or transit. In European refugee accommodations poor sanitation, overcrowded living conditions and barriers accessing health care services are feasible risk factors. One example for AMR bacteria is the Methicillin-resistant Staphylococcus aureus (MRSA). In the last decades, S. aureus became a global threat for healthcare, through the gain of AMR genes.

Methods:

Nasal swabs voluntarily provided by refugees living in accommodations in Bielefeld (Germany) were checked for presence of S. aureus. After identification by 16S rRNA sequencing the isolates were typified and antibiotic resistances were phenotypically detected by broth dilution method. For MRSA, the resistance genes were identified by PCR.

Results:

Nasal swabs of participating refugees contain antibiotic resistant S. aureus, including MRSA. Some isolates are resistant against various therapeutic antibiotics, like clindamycin and erytromycin. Nearly all isolates are resistant against penicillins. Resistances against vancomycin and the reserve antibiotic linezolid were not detected.

Conclusions:

Efforts to reduce AMR rates in Europe focus on surveillance, screening and antimicrobial stewardship. As the living situation in host countries is expected to be a risk factor for AMR persistence, host countries may also consider improving the accommodation of refugees.

Spiritual participation and its relation to housing conditions for refugees in Germany

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Background:

Many studies claim a positive relation between religious / spiritual participation and individual wellbeing. Thus, religious communities play a supportive and socializing role, and supply group assistance, security and solidarity also for refugees. Some dimensions of religion, such as the opportunity of practicing congregational rituals, transmitting religious traditions to the next generations, and building a religious/spiritual community may be linked to the housing conditions.

Objectives: The contribution aims to answer the following questions by showing the effects of housing conditions on the well-being of refugees:

1. Is the spirituality of refugees affected after settlement in collective accommodation sites, and if so how?
2. Does the distance or proximity to collective worship places affect the spiritual participation of refugees and their activities in religious organizations?

Methods:

The data is derived from an ongoing research project at Bielefeld University, Germany. The research uses a multi-method approach. Semi-structured qualitative interviews (28) are supported by participatory observations and questionnaire application (N = 120).

Results:

Both in the Interviews and quantitative survey, many Christian, Yezidi and Muslim respondents explicitly argued about their religious participation / nonparticipation due to their housing conditions either in collective accommodation or private housing.

Conclusions:

Christians and Yezidis have fewer opportunities of collective practises of religion due to remote accommodations. The Muslim participants on the contrary have more options of practising with their coreligionists. The availability of religious institutions near to housing places affects this directly.

3.C. Workshop: Bridging the Gap in Digital Public Health in Europe

Organised by: EUPHA (DH)
Chair persons: Luís Velez-Lapão - Portugal, Anthony Staines - Ireland
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Europe is facing several health challenges and public health plays an important role in it. However, to address the increasing demand for public health services, public health institutions need to tackle digitalization in a proper and evidence-based way. Digital health comprises both an organizational and a technological component. While the technological one has been widely addressed, the organizational one got little attention so far. This is due to a lack of knowledge regarding the understanding of the new role of organizations that provide digital health services. Public health is a field deeply dependent on data and with an important opportunity to leverage information technology. Digital health could, within 10 years establish a new paradigm in public health. The public health professionals need urgently to tackle digital health to bridge the gap with others areas of healthcare. Moreover, since public health is a multi-disciplinary activity we want to take the opportunity to debate digital public health with European experts from different fields of knowledge.

Three presentations from the point of view of People, Technology and Services. Digital health should be addressed as an evidenced-based approach towards both improving health professionals performance and quality of life of patients. This workshop aims at:

- To create the momentum towards the proper use of digital technologies in public health by discussing the main challenges and opportunities for European Public Health.
- To establish a forum to discuss digital public health solutions based on evidence to better improve the adoption of these tools in the public health profession;
- To have a serious discussion after 3 presentations that will clarify the main challenges and opportunities;
- After de presentations, a debate will be guide to help identify the main challenges for digital public health in Europe;

Key messages:

- Public Health Digitalization is essential to address health inequalities in Europe. The workshop identifies what are the main priorities for a sustainable EU public Health digitalization.
- Mutual learning, knowledge and good practice exchange in using digital technology can be organised in various ways – we show practical current examples on how it has been done.

The Challenge of Digital transformation in Public Health in Europe?

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Background:

Healthcare systems are facing many challenges, from demographics to multi-morbidities that are associated with increasing the demand for more services. The new technologies are thought to be a solution to these problems. However, to address these problems with digitalization of healthcare it will imply the combination of proper use of technologies, aligned with integrated working-processes and skilled professionals.

Methods:

This study provides a scoping review on existing public health digital services and aimed to identify the main digitalization challenges, from competencies to technology use. The databases of Pubmed and Ebsco were searched.

Results:

17 papers were selected, and the three main priorities were identified. First, it will highlight the challenges associated with the digitalization of healthcare, the second the implementation of digital services, considering a method to design online service, the third the impact of digitalization on healthcare workforce performance. An overview of the major effects of transformative technologies (e.g. eHealth services, Internet of Things solutions, Artificial Intelligence) on the healthcare workforce will be addressed. Moreover, to what extent is the digital transition affecting formal qualifications of public health professionals? What are the major implications of technological change for future skill needs and competences of the public health workforce? Finally, the discussion examines the challenges of digitalization for public health services in Europe.

Conclusions:

Proper digitalization of healthcare will enable changes in the paradigm of healthcare delivery as well as in the mechanism for patients' participation and engagement. The sustainability of healthcare will depend on how efficient we will make digital-services design.

Key words:

Digital health, Public Health, Digital Transformation, Public Health professionals, Europe

Q-Methodology Evaluation of a European Health Data Analytic End User Framework

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Background:

MIDAS (Meaningful Integration of Data Analytics and Services) project is developing a big data platform to use a wide range of health and social care data to support better policy making. As part of the project evaluation, we have used Q-methodology, a well established approach, to understand the perspectives of the individual participants on their needs and how the MIDAS system is meeting them, at its current stage of development.

Methods:

We defined a concourse of 36 statements relevant to project implementation and goals, by working from a logic model for the evaluation, and structured interviews with project participants. This was delivered online to participants. Analyses were done in the qmethod package. The first q-sort was done at 14 months into the project.

Results:

16 people took part, 6 developers, 5 managers, 2 health professionals and 3 others. Three factors were identified in the data. These were tentatively labelled 'Technical optimism', 'End-user focus' and 'End-user optimism'. These loaded well onto individuals, and there were few consensus statements. There were significant differences in perspectives between different groups of participants. In particular, two of the developers held opposite perspectives to most other participants on the third perspective identified. This was drawn to the attention of the participants, and a more intensive process of communication was set-up, seeking to reduce the divergence.

Conclusions:

A Q-methodological approach to evaluating the implementation of a large and complex health ICT system showed considerable divergence between the perspectives of users, developers, and managers. Such divergences can lead to project failure. Q-methodology is a valuable tool has seldom been used in public health research.

Keywords: Q-Methodology, Public Health, Data Analytics, Decision Support.

Artificial Intelligence-based tools to control healthcare associated infections: where do we stand

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Background:

Control of Healthcare associated infections (HAI) is a key public health concern in Europe. Current HAI surveillance systems are based on manual medical records review, vulnerable to misclassification & expensive. Artificial intelligence (AI), as a digital tool, offers great potential to HAI control. Still, scant evidence is available on both its practice and impact.

Methods:

As part of a broader multidisciplinary project, we conducted a systematic review to retrieve, pool and critically apprize all the available evidence on practice, performance and impact of AI-based HAI control programmes. We followed PRISMA and searched the Medline and Embase databases for relevant studies. Included studies were stratified by HAI type and outcomes of interest, including all possible performance measures, clinical, organizational and economic outcomes.

Results:

We screened 2873 records, resulting in 27 papers included in the review. Studies were carried out in 9 countries, the majority in the US (56%), 18.5% in EU countries, 25.9% published in 2018. Two thirds of studies focused on selected types of infections. Study designs were very diverse and performance observed for HAI detection were very heterogeneous, precluding pooled calculation of summary diagnostic accuracy estimates in most instances, but generally higher than non AI-based models. Overall performance measures of AI algorithms were: sensitivity range 19%-92%, accuracy 70.2%-96.1%.

Conclusions:

Use of AI for HAI surveillance of HAI has increased reliability compared to traditional surveillance or to automated surveillance models. With ongoing improvements in information technology, implementation of AI models will improve the quality and capacity of surveillance will support hospital HAI surveillance.

Main messages:

- AI offer great potential to healthcare associated infections control.
- Preliminary evidence show AI-based models have perform better than manual or automated models for HAIs detection.

3.D. Skills building seminar: Develop collaborative tools among public health societies to mutually reinforce their interventions

Organised by: Société Française de Santé Publique
Chair persons: Yves Charpak - SFSP, Emmanuel Rusch - France
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National public health societies face specific national challenges but also common challenges in several countries but in specific national contexts. At EPH2018, a first workshop entitled ‘ Can national public health societies work together for mutual support on their daily challenges? “ had allowed the national public health societies represented to highlight their interest and their ability to work together. Among the different lines of work identified, one of them was particularly emphasized: ‘How to make allies and influence health policies?’.

This line of work brings different reflections: When adopt postures of conflict and / or cooperation with the public authorities? How to choose to argue from evidence based public health and / or to build and tell simple and consistent stories? What are the situations where we risk going from ‘collaborating with’ actors to’being manipulated by’ actors? What are the conditions for forming effective alliances in public health?

Several topics have been identified as common issues facing the different national public health societies: migration and health, alcohol, food and information of public, physical activities and active mobility, environmental pollution.

As part of this workshop we want to share the feedback of experiences presented by several national public health companies on common public health issues to learn lessons to strengthen their actions.

The feedback presented will help identify and construct shared analysis frameworks, to identify the conditions favoring the influence of national public health societies. The development of these common tools will strengthen their interventions at a national level and enhance their collective effectiveness at the European level. EUPHA is the relevant framework for inscribing this approach in time and space.

Key messages:

- Eupha is the ideal place to meet other public health companies and find opportunities to develop practical transnational collaborations for a better impact of public health at the national level.
- The sharing of experience on common topics will strengthen the influence of the SNSPs and the impact of their actions at the country level.

Public Health, Ministry of Health and Economic Actors: the case of food and information of public

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The experience of France in the implementation of a frontofpack label, the Nutri-Score, clearly illustrates the constant tugofwar between public health experts and the industry and provides a framework for an efficient strategy that could be replicated at the EU level.

Dietary risk factors is in the top three leading causes of morbidity and mortality in Western Europe. Such high burden of diseases urges the implementation of strong and efficient public health strategies in order to curb the impact of poor diets. The public health community has long promoted strategies impacting both individual dietary behavior and the food environment, in a consistent global framework. However, the latter strategies imply to act upon the food and beverage manufacturers, to provide consumers with better information on the nutritional quality of the foods they produce and to ensure a shift in the nutritional composition of the food offer towards healthier foods.

Among the various public health nutrition strategies that are considered efficient in both modifying consumer behavior and enticing reformulations by the food industry, front-of-pack food labeling has been identified as a key policy component in a global program.

The construction of alliances in the field of health: about addictions

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The construction of alliances in the field of addictions is a key topic to develop effectiveness and efficiency public health policies.

The short-term economic stakes can not be the alpha and the omega of public policies. Whether general or sectoral, such as agriculture, they must take into account their impact on the health of populations established by scientific work.

3.E. Workshop: Alcohol policy reforms in European countries – challenges and solutions

Organised by: National Institute for Health and Welfare, Finland, ANPAA; EUPHA (PHPP)
Chair persons: Sofia Ribeiro - Portugal, Ilmo Keskimäki - Finland
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Alcohol-related harm is a major public health concern in Europe, with levels of alcohol consumption and associated health harm among the highest worldwide. According to the European Commission, premature deaths linked to alcohol account for over 7% of all European morbidity, and alcohol is a major avoidable risk factor for neuropsychiatric disorders, cardiovascular diseases, cirrhosis of the liver, cancer and unintentional and intentional injuries. Even moderate use of alcohol raises long-term risks of certain heart conditions, liver disease and cancers, and frequent use can lead to dependence.

There is extensive research on efficient strategies to reduce alcohol-related harm, alongside high-level policy recommendations. Examples are the WHO's global strategy to reduce harmful use of alcohol and the WHO European office's European action plan to reduce the harmful use of alcohol 2012-2020. The European Union (EU) strategy to support member states in reducing alcohol-related harm expired in 2012. Since then, the Committee on National Alcohol Policy and Action (CNAPA) has drawn up a non-binding Action Plan in relation to alcohol and EU countries have the main responsibility for their national alcohol policy.

Despite strong evidence bases supporting alcohol policy, the implementation of potentially effective alcohol policy is often challenged by companies with commercial interests seeking to undermine evidence and advocate for less effective alternatives. These alternatives, such as education or voluntary industry action, are often favoured by politicians and the public. This opposition to evidence-based alcohol policy represents a challenge to public health.

In this session, we will discuss recent developments in alcohol policy reform in Estonia, Finland and Scotland; reflecting on the outcomes of policies and the challenges faced in implementation. We invite commentaries from national experts and from the DG Sante and WHO Euro. Among these the French commentary will address the influence of the alcohol industry in circumventing effective public health policies, with discussions concerning the new strict French low-risk guidelines on alcohol use as one example. The objective of this workshop is to share experiences of the challenges faced in applying effective alcohol policies, to discuss ways to tackle those challenges, and to invite the EU and the WHO to share their views on ways to overcome these barriers in future policy advocacy.

Key messages:

- Commercial determinants of health are a powerful force in preventing effective public health policy on alcohol-related harm.
- The public health community need to work in a persistent and coordinated manner to bring in a suite of effective alcohol policy interventions across Europe.

Estonia: Problems created by border-trade for applying high-tax alcohol policy

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In early 2000s, Estonia had one of the highest levels of alcohol consumption globally. In 2008, the average salary could buy 62 litres of strong spirits, compared with 28 litres in 2000; the increase of affordability was one of the highest in the EU. Since then, alcohol consumption per capita has been reduced by a third, which has also led to a reduction in related problems: mortality from alcohol-related illnesses has fallen by 40%. This was achieved with the progressive adoption of measures that rely heavily, but not exclusively, on increasing excise taxes. In 2014 a comprehensive alcohol policy document was adopted, paving the way to the measures in all 10 areas of WHO global strategy to reduce harmful use of alcohol. Since then Estonia has launched treatment programme and awareness campaigns, restricted advertising and the exposure of alcohol in the public sphere.

By 2017, the over-exploitation of the tax-based measures backfired. The twofold alcohol price difference between Estonia and Latvia, resulting from doubling the excise tax for beer and raising significantly those for other alcoholic beverages, caused an unintended increase in cross-border trade between the two countries. This, in turn, caused a new wave of public discussion around pricing policies, and a loss of popular support for tax increases. As a first step to address the problem, the government halved the tax increase planned for February 2018, thus increasing beer tax by 9% and spirits tax by 5%. Tax increases scheduled for 2019 and 2020 were cancelled, and taxes on spirits, beer and cider were cut by 25% instead. This resulted in Latvia decreasing their spirits taxes by 15% in turn. This development forces health promoters to seek new ways to reduce harm to public health and win back support to healthy policy choices.

Finnish alcohol policy reform: battle over public health objectives

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A new Alcohol Act came into force in Finland in 2018. The preparation of a comprehensive reform of the alcohol legislation was started already in 2011. The aim of Finnish alcohol policy has been to reduce alcohol-related harm, and the central means to do that have been by way of high taxation and restrictions in the physical availability of alcohol, in which the state alcohol monopoly has had a central role. The process of reforming the act was a long battle between forces that wished to continue underlining the public health aims and using efficient tools to reach those aims on the one hand, and neoliberal politicians aligned with the strong alcohol industry lobby and enthusiasts in social media who wished to get rid of regulation. The new Act somewhat expanded the rights of grocery stores to sell alcohol and de-regulated the on-premise trade by dismantling regulations in the old legislation. The retail state monopoly was weakened as a result, but it still has an important impact on restricting the physical availability of alcohol. Previously when alcohol has been made more available, consumption has increased, and also this time this was the expected outcome. However, an interrupted time series analysis has shown no statistically significant effect of the law change in the first year. One central explanation seems to be that price competition has been less intense than expected. Nonetheless, despite the fact that alcohol taxes were raised, a 10-year downward trend in alcohol consumption from 2008 to 2017 was halted.

The Scottish case: minimum unit pricing for alcohol

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There have been longstanding social and public health concerns about the levels of harmful alcohol consumption in Scotland. The Alcohol (Minimum Pricing) (Scotland) Act 2012 targets all alcohol sold through licensed premises in Scotland by ensuring it cannot be sold below a set minimum unit price. The pricing policy is currently set at 50p per unit of alcohol. Following a legal challenge and a vote in the Scottish Parliament, minimum unit pricing was implemented in Scotland on 1 May 2018. The aim of the Scottish alcohol policy has been to reduce the adverse public health consequences of alcohol consumption. It has also been identified as a potential measure for reducing health inequalities since alcohol-related harms are strongly socially patterned. The Scottish alcohol policy is important case to consider for a number of reasons. First, the nature of the policy differs. Rather than the introduction of a variable floor price, which may encourage switching in consumption from one product to another to maintain alcohol intake, minimum unit pricing introduces a price threshold that is uniform across all alcohol products. Second, minimum unit pricing is being introduced into a competitive commercial environment with strong vested interests, rather than a government-controlled monopoly. Third, the policy has been framed as a public health intervention, rather than primarily for revenue-raising reasons. Research on its development and evaluation will be considered to inform broader discussions on policy advocacy. Here we show a visualisation of the minimum unit pricing policy network to highlight how the public health community could work in more coordinated manner to support alcohol policy interventions.

3.F. Round table: Applying multidisciplinary sciences to improve paediatric primary care for children in Europe

Organised by: EUPHA (CAPH)
Chair persons: Danielle Jansen - EUPHA (CAPH), Jochen Ehrich - Germany
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Considerable progress has been made in improving child health and well-being in Europe over the past 40 years, with great reductions in neonatal, and child deaths, and in deaths from causes such as vaccine-preventable diseases. Paediatric primary care (PPC) has significantly contributed to these advances. However, there are still differences between and within countries regarding the content and organizations of primary care for children that might have an impact on important aspects such as access and availability of primary care. These cross-country and within-country differences together with current and future challenges in child health care, such as increasing prevalence of chronic and long-term conditions, fragmentation of care and shortage of health personnel, pose a complex challenge for European countries. Working towards an approach to tackle these challenges requires the vision, input and collaboration of multidisciplinary sciences.

In this workshop four perspectives are brought together with the goal to learn from each other's experiences and to establish a common knowledge base on how to collaborate between different disciplines and sciences to bring PPC to a next level. The first presentation will be from a public health perspective and is about the comparison of actual and desired organization and content of adolescent health services. The second presentation will be a paediatrician's perspective and stresses the importance of an adequately trained paediatric workforce. The third presentation will be from a sociological perspective and focuses on the societal scale drivers framing health among children and their families. In the final presentation a philosophical perspective will be given on adherence to therapy, resilience and resonance in the treatment triangle of 'patient-family-therapist'. The presentations will be followed by a round table discussion in which the audience will be involved: the presenters will answer questions and discuss with the audience how we should create better and sustainable PCP by making use of multiple disciplines and sciences.

Key messages:

- Differences between and within countries regarding the content and organizations of primary care for children might have an impact on important aspects such as access and availability of primary care.
- Working towards an approach to tackle challenges in paediatric primary care requires the vision, input and collaboration of multidisciplinary sciences.

Organization and content of primary care for adolescents – comparison of actual and desired situation

Danielle Jansen

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To successfully navigate increasing autonomy, independence and health behaviors in adolescence, accessible adolescent health care services (AHS) are essential. AHS comprise all services in primary care that are aimed at the specific needs of adolescents and can be provided in various settings such as public services, private services, schools and hospitals. In the MOCHA project (Models of Child Health Appraised) we assessed the structure and content of AHS in 30 European countries against the standards in the field of adolescent health services: accessibility, staff attitude, communication, staff competency and skills, confidential and continuous care, age appropriate environment, involvement in health care, equity and respect and a strong link with the community. The results revealed that although half of the 30 countries did adopt adolescent-specific policies, many countries did not meet the current standards of quality health care for adolescents. For example, the ability to provide emergency mental health care is limited. In addition, one third of the countries do not have a formal policy which guarantees the confidentiality of a consult and the possibility to consult a physician without parents knowing. Finally, around half of the countries do not have specialized centers in adolescent health care in order to tackle comprehensive health issues. Access to adolescent health care services needs to be improved for vulnerable adolescents such as migrant adolescents. Schools, ambulatory settings and hospitals should offer accessible, comprehensive health care and a culturally appropriate approach, particularly given the number of migrant adolescents living in EU and EEA countries. Finally, the health care systems should improve their communication strategies, to assist young people in understanding their rights and responsibility in the domain of health, and how and where to access to adequate care.

Children deserve adequately trained doctors

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Children treated in different European countries continue to have very variable outcomes. Among several factors that might affect these outcomes, organisation of primary care services for children and training programmes for primary care clinicians are likely to be important factors.

Children have an unquestionable right to health, safety, and wellbeing. Children have the right to access the highest possible standards of health-care services and facilities, both in primary health care and when they need specialised care. Any restriction of provision of appropriate care would contradict article 24 of the UN Convention on the Rights of the Child.

Paediatric primary care is an academic and scientific discipline dealing with all issues affecting the health and wellbeing of infants, children, and adolescents from birth to adulthood in the context of their family, community, and culture. The primary clinician, ideally a paediatrician, is the first contact for children until they reach adulthood and is thus responsible for provision of comprehensive and continuing care throughout infancy, childhood, and adolescence.

Paediatric care in both primary care and hospital settings needs special knowledge, ethics, empathic behaviour, and access to services, including disease prevention and health promotion. These aspects are therefore mandatory for all paediatric training both for paediatricians and family doctors.

There should be a structured and accountable paediatric training programme for all doctors providing first-line care to children in primary care. When family doctors provide primary health care close collaboration with paediatricians and adequate continued training in both paediatrics and primary care is advised. Moreover, all children need timely access to professional paediatric advice.

Improving child and adolescent public health from a sociological point of view

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Changes in social divisions and their intersections are keys to understanding child and adolescent health from a sociological perspective. Furthermore, with European societies facing demographic change, aging of the population will also lead to a change in the societal position of children, young people and their families. This paper will focus on discussing ways to improving child and adolescent public health with special reference to broader societal and demographic changes and their implications to service provision, milieux and (collective) lifestyles of families. Broadly the point of the presentation is that ignoring the larger societal context may amount to prioritizing services, programmes or income transfers contributing to few or no public health effects at all.

Clinical philosophy in the context of pediatric care

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Medical care may be better in many countries than it currently is. Developing countries are in the need to catch up with affluent countries, and rich countries have a need for answering the question of how quality of health care can be improved for their total population despite increasing high-technology-induced cost through comprehensive cost-benefit analyzes. Health is about 85% dependent on general health care and 15% on medical care. The current quality differences of health care not only have their roots in economic crises, but in the lack of application of the thought model of 'root-cause-effect long-term consequences.

The questions arise as to whether this lack of integration of philosophical perspectives and activities contributes to deficiencies in the health care system and how philosophy could lead to new pathways of thinking. Obviously, the health systems of many European countries are having major problems translating the necessary changes in care from the theory level to the policy executive at the practical level. Furthermore, in many health care systems, adequate socio-philosophical concepts for adapting to constantly changing social conditions are missing with regard to adequate, accessible and affordable health care.

This presentation discusses the pros and cons of greater involvement of spiritual welfare, clinical philosophy and philosophical practices in medical care for adolescents in order to improve 1. adherence to therapy, 2. resilience and 3. resonance in the treatment triangle of 'patient-family-therapist'.

3.G. Workshop: Impact of nutrition on non-communicable chronic diseases: a global perspective

Organised by: EUPHA (FN), EUPHA (CHR)
Chair persons: Tatjana Buzeti - EUPHA (FN), Iveta Nagyova - EUPHA (CHR)
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Non-communicable chronic diseases (NCDs) represent a public health issue due to their profound impact on population health. Major NCDs risk factors, including obesity, hypertension and diabetes, represent a threat of gigantic proportion, while intervention to prevent NCDs remains of paramount importance in order to decrease their burden over the next decades. Among others, quality of diets has changed substantially and a global shift to unhealthy diet high in calories and highly processed foods mainly due to the rapid urbanisation, increasing incomes, and inadequate accessibility of nutritious foods has been observed. As the burden of NCDs across the worlds remains unacceptably high, the international policy framework should aim to develop evidence-based policy approaches to reduce such burden globally.

In this context, the EUPHA Sections on Food and Nutrition and on Chronic Diseases aim to propose a joint workshop to provide the latest updates from leading scientists and experts involved in global health research, with a special focus on NCDs and nutrition-related risk factors.

The objectives of the present workshop are the following: To quantify the burden and temporal trends of non-communicable chronic diseases risk factors (such as obesity, elevated blood pressure and diabetes) all around the globe, with a focus on European countries; To assess the impact of nutrition-related risk factors on non-communicable chronic diseases; To explore socio-economic and cultural correlates to dietary changes in developed and developing countries; To discuss the usage of instruments aimed to identify best practices in food policies to prevent junk food consumption.

Organizing the present workshop would provide an important occasion for gathering experts in the field and sharing opinions with the audience in light of the presented results. All publication discussed have been published recently, others are ongoing projects, thus providing a unique opportunity to discuss about potential advocacy activities and policy approaches in the context of a EUPHA conference.

Key messages:

- The workshop will provide insights on the current burden of NCDs risk factors.
- The workshop will focus on dietary risk factors, their socio-economic determinants, and strategies to implement a healthy and sustainable diet globally.

Global trends of chronic non-communicable diseases risk factors

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Background:

One of the global targets for non-communicable diseases is to reduce, by 2025, the rise in global trends of major non-communicable diseases (NCDs). We aimed to estimate worldwide trends in NCD risk factors.

Methods:

Data from the NCD Risk Factor Collaboration (NCD-RisC) allowed the analysis of over 128 million children, adolescents, and adults with available information on height and weight, 4.4 million participants with data on diabetes through measurement of its biomarkers, and 19 million adults that had measured the blood pressures.

Results:

No changes in age-standardised mean BMI in girls and boys from 1975 to 2016 were registered in eastern Europe, while an increase of up to 1.00 kg/m2 per decade was reported in central Latin America (for girls) and in Polynesia and Micronesia (for boys). Global prevalence of obesity increased from less than 1% in 1975 to 5.6% and 7.8% in 2016 in girls and boys, respectively. In adults, prevalence of obesity increased from 3.2% in 1975 to 10.8% in 2014 in men, and from 6.4% to 14.9% in women. Global diabetes prevalence increased from 4.3% in 1980 to 9.0% in 2014 in men, and from 5.0% to 7.9% in women; the lowest prevalence in 2014 has been recorded in northwestern Europe. The number of adults with diabetes in the world increased from 108 million in 1980 to 422 million in 2014. Estimation from current trends shows that only a minority of countries (mostly in western Europe) have a 50% or higher probability of halting the rise of diabetes by 2025. Global prevalence of raised blood pressure was more than 20% in both men and women in 2015. Globally, the number of adults with raised blood pressure increased from 594 million in 1975 to 1.13 billion in 2015, with the increase largely in low-income and middle-income countries.

Interpretation:

The burden of NCD risk factors is partially due to population growth and ageing. However, lifestyle factors play a crucial role in NCD prevention.

Impact of nutritional risk factors on chronic non-communicable diseases

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Background:

modifiable risk factors, can help to identify emerging threats to population health and opportunities for prevention of chronic non-communicable diseases (NCD). Among various risk factors, poor nutrition quality has been identified as a leading determinant of NCD.

Methods:

The Global Burden of Diseases (GBD) Study provided a comprehensive comparative risk assessment (CRA) of risk factor for NCD, quantifying the impact of behavioural, environmental and occupational, and metabolic risk-outcome pairs that met the GBD study criteria for convincing or probable evidence of causation. Special focus on nutritional risk factors will be dedicated, discussing the proportion of disease-specific burden attributable to each dietary risk factor and the level of intake associated with the lowest risk of mortality.

Results:

In 2017, over 30 million deaths were attributable to risk factors. When ranked, high systolic blood pressure was the leading risk factor, accounting for more than 10 million deaths, followed by, high fasting plasma glucose, and high body-mass index. A total of 11 million deaths were attributable to dietary risk factors. High intake of sodium, low intake of whole grains, and low intake of fruits were the leading dietary risk factors for deaths globally. However, important differences between regions and outcome (i.e., cardiovascular disease vs. cancer) have been registered. Besides the major aforementioned factors, underrated dietary risk factors, such as low calcium intake, have been found important contributors to cancer burden in certain developed countries.

Interpretation:

The combination of increasing metabolic risks and population ageing will probably continue to drive the increasing trends in NCD at the global level. These data provide a comprehensive picture of the potential impact of suboptimal diet on NCD mortality and morbidity, highlighting the need for improving diet across nations.

Socio-economic determinants of nutrition transition in Southern European countries

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Issue/problem:

Traditional dietary patterns in southern European countries are changing into less healthy choices, especially among the younger generations.

Description of the problem:

There is consistent evidence of a transition from Mediterranean foods preference toward a higher consumption of high-caloric and hyper-processed foods. Potential reasons for the observed nutrition transition or barriers for adopting healthy dietary pattern across the borders of the Mediterranean basin are represented by lifestyle changes, food globalization, economic, and socio-cultural factors.

Results:

Emerging socioeconomic inequalities in other domains of healthy dietary behaviors such as dietary variety, access to organic foods and food purchasing behavior seems to affect Southern Mediterranean countries while countries in Northern Europe and some other Countries around the world are currently embracing a Mediterranean-like dietary pattern. A potential cause of this downward trend could be the increasing prices of some food items of the Mediterranean diet pyramid. Recent evidence has shown a possible involvement of the economic crisis, as material resources becoming strong determinants of the adherence to the Mediterranean diet just after the recession started in 2007-2008 in part of Europe. Undesirable dietary modifications possibly linked to the current economic crisis were mainly reported by lower socioeconomic groups.

Interpretation:

Traditional healthy dietary patterns have become socioeconomically patterned, and the prominent role of financial over cultural resources in determining the adherence to this pattern should be taken into account. The current economic crisis represents a major health threat for the general population but in particular for the most vulnerable socioeconomic groups, possibly leading to wider gaps in terms of risk/protective factors across socioeconomic categories.

Epidemiological and nutritional transition in low- and middle-income countries

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Issue/problem:

In the last decades, the number of deaths from non-communicable diseases in developing countries has risen to those observed in developed countries.

Description of the problem:

Nutritional research in developing countries has primarily focused on under-nutrition, particularly among vulnerable population subgroups such as women and children. However, while economic growth has a significant social impact at population level, there is suggestive evidence of an ongoing nutritional transition leading to concurrent under- and over-nutrition in the population.

Results:

The ongoing nutritional transition in these settings has been mostly linked to the rapid process of urbanisation and westernization. Data from several developing countries suggest that improvements in developmental indicators is accompanied by higher availability of highly processed poorly nutritious foods. Regarding socioeconomic factors, results demonstrated that better education and better living standards were associated with higher odds of overweight/obesity after adjusting for confounders, including urban vs. rural setting. This is likely a consequence of the ongoing nutritional and epidemiological transition occurring in these settings. In fact, developing countries have not yet reached the same phase of nutritional transition as an economically affluent country, and while high-calorie diets comprising fast-food are the more economically affordable option in the latter, such diets are still reserved for the more affluent individuals in some developing countries, where economic growth has only just begun to allow affluent individuals to afford fast-food.

Conclusions:

Understanding the underlying ecological and socioeconomic roots of both extremes of the nutritional status is vital to design successful public health interventions.

Identifying best practices in junk food taxation and other food policies: Selected examples and their assessment

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Issue/problem:

Noncommunicable diseases are the main contributor to the global mortality, being responsible, as estimated, for 71% of deaths each year. About 80 of dietary dependent diseases has been identified so far, and their prevalence tends to exceed 30% in some populations.

Description of the problem:

The growing prevalence of these diseases, along with impact on the quality of life, disabilities, as well as rising direct and indirect economic costs, constitute a basic foundation for emerging efforts to develop and implement new solutions within national health policies aimed at modifying dietary behaviours and reducing their negative impact on health status of individuals and populations. To address these problems the Joint Funding Action "Effectiveness of existing policies for lifestyle interventions - Policy Evaluation Network (PEN)" has been initiated, in which 28 research group across Europe are collaborating.

Results:

The primary aim of the presented study will be to discuss the usage of the PEN instrument to identify best practices in food policies, including sugar sweetened beverages and junk food taxation. Previous examples of the instrument implementation will also be presented, including New Zealand, Australia and Canada, along with the results of current works on its development within the project. The second basic aspect for the study is to discuss and assess examples of food policies implemented in selected countries in terms of their effectiveness in modifying unhealthy behaviours.

Lessons:

The time that has passed since the implementation of the evaluated solutions is too short to assess actual impact on health. Nonetheless, the existing evidence, including data from countries being the most successful examples of junk food taxation, like Mexico and Hungary, suggest that their impact on consumer choices, health literacy and also food industry in terms of food products composition, is positive.

3.H. Workshop: Access to health services in health systems providing universal coverage

Organised by: French National Institute of Health and Medical Research
Chair persons: Olivier Grimaud - France, Helmut Brand - Netherlands
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Universal health coverage (UHC) is part of the global WHO strategy to improve health. UHC and equity in access to care fall within the shared principles and values of EU health systems. However, as reported in 2016 by the Expert panel on effective ways of investing in health (EXPH), significant amount of unmet needs persisted both between and within EU member states. Access to health services encompasses the dimensions of affordability, user experience and availability of services with potential barriers arising at individual, providers or health systems levels. Health needs are constantly evolving as a consequence of population ageing and of health care technology development. Consequently access to care does not simply mean availability of a single component of care, but rather to an array of pertinent, coordinated, cost-effective and timely primary and specialized health and social interventions. Measuring performance in that respect is beyond the ability of commonly used "national level" indicators of access. Available research suggests that achieving ubiquitous access to optimal care across territories and populations (eg socioeconomic groups) is hard to achieve. This applies to the whole spectrum of health interventions, from preventive care such as immunizations to multidisciplinary interventions required for the management of chronic diseases. In this context, the workshop proposes to present examples of policy initiatives and results from research projects focusing on access and use of health care conducted in a variety of settings. The aims are to share knowledge about methods used in measuring variations of access, to improve understanding of their determinants and to identify avenues for improving performance.

The workshop is proposed by a multidisciplinary and international group of research teams. It will start with a short introduction from the chair (5 minutes, Olivier Grimaud) followed by five presentations (10 minutes) addressing the issues of variations in access and use of care from different research teams and in a variety of settings. The first presentation will report on an innovative policy aiming at improving UHC in India. The following presentations will illustrate the challenges of providing access in high income countries, including, Scotland, France and Australia. In the last part of the workshop (30 minutes) comments from Prof Helmut Brand (former expert panel member of the EXPH) will introduce a general discussion with the audience moderated by the chair.

Key messages:

- Even when the conditions for universal health coverage are in place, providing equitable access to quality care remains a challenge.
- Understanding variations in access to care would help improve performance and equity.

''Living long in India''– India's progress towards Universal Health Coverage

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Issue:

There are multiple small health insurance schemes throughout India. However, high out-of-pocket (OOP) expenditures, unaffordable and inequitable access to healthcare services still persist. In an attempt to address these issues and achieve Universal Health Coverage (UHC), India launched the healthcare scheme 'Ayushman Bharat' (''long live India'') in 2018.

Description:

The Ayushman Bharat (AB) scheme has two components which include 1) transforming the existing primary healthcare centers (PHC) under the control of State Governments and 2) the National Health Protection Scheme (NHPS) also known as ''ModiCare'' - a health insurance. The scheme aims to transform nearly 150.000 PHCs to deliver comprehensive primary healthcare services across the country by 2022. NHPS covers the costs of almost all secondary and many tertiary care procedures of about 40% of the total Indian population. The coverage will be approximately €6.400 per year per beneficiary family; 60% of the costs are borne by the Centre and 40% by the States.

Results:

Approximately €127 million have already been allocated by the Centre towards the AB scheme for the fiscal year 2018-19. Till date, around 29 million health insurance cards have been issued, approximately 1,8 million beneficiaries have been admitted and around 15.291 hospitals have been empaneled under NHPS. However, there is no data available validating the usage of the health services yet. Few Indian states are yet to implement the AB scheme.

Lessons:

For the first time, attempts have been made to provide affordable healthcare services to the Indian population under a single common initiative. However, the AB scheme fails to cover outpatient health services, which are an important part of OOP expenses in India.

Main message:

The effort to launch Ayushman Bharat in a big, democratic and diverse country like India has to be lauded, which not only aims to make healthcare services affordable but also aligns itself to the concept of UHC.

Variations in the use of caesarean section: a Comparison between France and Australia

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Background:

There has been a rise in obstetric intervention during labour and birth including rates of caesarean section around the world. The rates of caesarean section are lower in France (20%) than Australia (34%). Both countries have universal health care systems. Australia has a well-established program of obstetric benchmarking and national data collection for comparing maternal and perinatal outcomes taking into account maternity units and maternal characteristics. Although the optimal caesarean section rate is not known, variation in caesarean section rates raise questions about what is driving variation in practice and whether the right care is being delivered. The World Health Organisation has recently released non-clinical recommendations aiming to reduce unnecessary caesarean sections, including that births are classified by Robson classification for easier comparison.

Methods:

We aim to compare rates of mode of birth in 2 tertiary hospitals- one in France and one in Australia using Robson classification. This project will investigate differences in patient casemix, and obstetric management that may lead to differences in outcome. In addition, we will try to explore differences in the health systems including clinical activity, induction rates, staffing (number, type (medical, nursing, midwifery)), and models of care.

Outcomes:

Caesarean section is one of the most common operations performed in hospitals. Important variations of surgical rates raise question regarding whether access to this procedure is optimized. Determining current practice and outcomes of women in two different settings will provide important data to inform hospital practice and further research. In addition, this research may inform national guidelines about indications for caesarean section.

Socio-economic inequalities in timing of childhood immunizations in Scotland

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In Scotland, like many other European countries, childhood immunization coverage is generally high, often exceeding levels typically required to achieve herd immunity (95%): uptake of the primary vaccines (excluding rotavirus) is ~96% (at 12month(m)), with the 1st dose of measles, mumps and rubella (MMR) at 97% (by 5 years). However, the recommended age to receive these vaccines is 2-4m and 12-13m respectively. Delays beyond these ages may indicate vaccine hesitancy or barriers to access and can increase the likelihood of disease outbreaks, especially if clustered among certain geographical or social groups. We used quantile regression to examine the age by which 95% coverage was met in different groups.

We analyzed data from the Scottish Immunisation and Recall System, for all children born in Scotland 2010-12 (n~200,000), estimating proportions immunized 'on time' with the primary (by age 5m) and MMR (by 14m) vaccines. Next we used quantile regression (with 95% cut-points) to calculate the age by which 95% coverage was reached among this cohort of children, overall and according to neighbourhood deprivation (Scottish Index of Multiple Deprivation[SIMD] deciles).

As in national reports, uptake of the primaries (at 12m) and MMR (at 5y) was >95%, with 91% and 89% immunized 'on time' (as defined above). Nationally, primary vaccines uptake reached 95% by age 7m. This varied by SIMD, from 6m in the least disadvantaged decile, to 9m in the most disadvantaged decile (difference 3m, CI: 2.7-3.3). Uptake of MMR reached 95% a year later than recommended (26m), with no discernible pattern by SIMD.

In Scotland, the age by which immunization levels meet those typically required to achieve herd immunity may be sub-optimal, particularly for MMR and (for primary vaccines) disadvantaged neighborhoods. This same approach might be used in other nations with high coverage to identify population groups that may be experiencing barriers to access and inform local intervention content

Geographical variations in access to expert centers for multiple sclerosis in France

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Background:

Multiple sclerosis (MS) is a chronic neurological disease affecting about 100,000 persons in France. Disease management is mainly supervised by the neurologist, supported by the general practitioner (GP). The complexity of the disease, due to the variety of symptoms as well as the recent changes in the therapeutic arsenal, requires both a high level of expertise and coordination between the different health care providers. To face this challenge, integrated and coordinated network of services ''MS expert centers'' have been progressively set up from 2000 onwards. Our objectives are to describe referrals to MS expert centers over the 2010-2015 period, to look for geographic variations and if any, to identify potential determinants of access.

Methods:

The analysis is performed on the French health insurance database which covers 97% of the French population. Geographic variations of access are explored, as well as association with the following parameters: demographics (age, sex), socio-economic characteristics (social deprivation index at residence, degree of urbanization), and density of health care services (GPs, neurologists, hospital beds).

Results:

Overall, 112,415 people with MS (70% women, mean age 46 years) were included. Initial results show that over the study period, 98% of patient had at least one visit to GP, 87% to neurologist, and 36% in a CRC SEP.

Conclusions:

The present study will assess to what extent MS patients have been able to take full advantage of an innovative organization of specialized care which was recently deployed in France. This model of care has been generalized by the French Ministry of Health in 2016 and 23 'competence and resource centers' for MS (CRC SEP) are now covering the whole national territory. Further research will be performed to identify whether and how this has modified access to specialized coordinated MS care.

Care trajectories of patients initiating dialysis as planned versus emergency procedure

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Background:

Emergency dialysis is defined as a first dialysis session performed within 24 hours after the nephrologist's assessment due to a life-threatening risk. Starting dialysis in emergency (ES) is associated with poorer outcomes compared to a planned start (PS). The aim of this study was to compare the pre-dialysis care trajectory between ES and PS patients.

Methods:

Patients $\geq$ 18 years old who started dialysis in 2015 in France were included. Data from REIN were linked with the French national health database (SNDS). Individual characteristics at dialysis initiation, inpatient stays (number, duration and diagnosis), and consultations with general practitioners (GP) and nephrologists during the year before dialysis start were compared between ES and PS patients, as well as with national clinical practice guidelines.

Results:

Among 8964 patients included, 30.6% started dialysis in emergency. These patients had more comorbidities than PS patients (19% of ES patients had 3 or more cardiovascular diseases versus 12.6% of PS patients, $p < 0.001$). In the year before dialysis start, ES patients had a lower median number of inpatient stays (1 versus 2 for PS patients, $p = 0.001$) but had a longer mean duration of hospital stay (8.1 days versus 5.8 days for PS patients, $p < 0.001$). ES patients had less consultations with a nephrologist (2.5 versus 4.5 for PS patients, $p < 0.001$). However, the number of GP consultations was not different between the two groups (9.7 versus 9.4 for PS patients, $p < 0.064$).

Conclusions:

Nearly 1 in 3 patients started dialysis in emergency with more comorbidities at baseline than PS patients. Their one year pre-dialysis care trajectory was characterized by less frequent nephrological follow-up and a similar GP follow up, compared with PS patients. These results raise questions regarding access to coordinated care associating GPs and nephrologists. This issue of coordination will be investigated using qualitative methods.

3.I. Round table: Using evidence for action – the story on life-course vaccination

Organised by: EUPHA (IDC), ECDC
Chair persons: Anna Odone - Italy, Karl Ekdahl - ECDC
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Vaccination represents a cost-effective public health intervention that saves millions of lives globally each year as well as increasing health and wellbeing of the population. Approximately 20 vaccines are currently in use in routine schedules, with several new or improved in the research pipeline. While immunisation programmes have traditionally targeted children, in recent strategic thinking around vaccination has shifted from an infancy focus to a life course approach that considers the benefits of vaccination at all ages. There are many benefits to targeting different age groups for vaccination, such as targeting individuals at an age that maximises protection (HPV among teenagers, shingles among older adults); boosting waning immunity (Td/IPV among teenagers); protecting at-risk individuals when they are most vulnerable (influenza in pregnancy, pneumococcal vaccine in older adults at clinical risk); protecting newborns in utero before they have the chance to be vaccinated (pertussis in pregnancy); or targeting an older age group to indirectly protect younger infants (MenACWY vaccination of teenagers). Even though the public health benefits of the life-course approach are evident, delivering vaccination programmes spanning such disparate groups represent constant challenges. These challenges can be grouped into: a) limited access to services b) communication challenges influencing attitudes and knowledge of vaccination and c) logistical challenges associated with the use of a wide range of settings for vaccination.

This session will explore, at country and regional levels, experiences and reflections on delivering vaccination across the life course, and evidence-based policy and operational actions taken to deliver an optimal programme at all ages.

Key messages:

- Life course vaccination presents opportunities to better protect the population but also brings unique challenges, both from the patient side and from the health systems side.
- Evidence-based tools and strategies to improve vaccine programmes across the life-course are increasingly available. Country and European level action is needed to achieve optimal results.

Investing in communication education- the example of vaccine hesitancy

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The European Centre for Disease Prevention and Control (ECDC) works on vaccine acceptance by searching for evidence, consulting with key stakeholders (epidemiologists, public health experts, family doctors, non-governmental organisation representatives for Roma, travellers, other under-served population groups), and identifying pilot interventions/ practices.

ECDC aims to strengthen workforce capacity on vaccine acceptance by developing a training for trainers. To guide the development of this multi-annual programme ECDC organised an expert meeting in April 2019 focusing on discussing and designing main elements of the training for trainers in vaccine acceptance at the country level. Key conclusions of the meeting include:

- A range professionals should ideally be trained on how to communicate to increase vaccine acceptance: frontline healthcare professionals, pharmacists, gynaecologists, teachers, politicians, journalists.
- Investments should be made both in postgraduate professional development of frontline healthcare professionals, as well as in university curricula for medical, nursing and teachers training.
- Training should include both knowledge around vaccines and immunization, as well as communication skills to discuss about vaccines and motivate immunization. Possibly legal aspects at the country level should be included, too.
- Vaccine acceptance should be addressed throughout the life course and vaccines.
- Training should be delivered in a blended format, with face-to-face sessions (especially for skills building) and e-learning (especially for knowledge components).
- Training should include a common European-level core but be done by local trainers, in the local language and adapted to the local context.
- Training initiatives should be integrated into a "bigger picture": sustainability of such an initiative should be taken into account, as well as the most efficient and interventions. Seeking synergies and partnerships are key in ensuring long-term success.

Understanding the perspectives of older adults and elderly regarding vaccination; a snapshot in four European countries

Aura Timen

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Prevention of infectious diseases in elderly by immunization is a prerequisite to ensuring healthy ageing. However, in order for the vaccine programs to be effective, these need to be provided by health care professionals who have up-to-date knowledge and high motivation. Furthermore, the knowledge and attitudes towards vaccination in the targeted age groups needs to be fully understood. When focusing on the information provision, it is important to know from whom or which institution older adults and elderly would like to receive and in which form.

In January 2019, an international project called the VITAL (The Vaccines and InfecTious diseases in the Ageing population) project was started, within the framework of IMI (Innovative Medicines Initiatives). One of the goals of the VITAL project is to develop strategies to educate and train health care professionals (HCPs) and to promote awareness among stakeholders involved in elderly care management.

We briefly focus on the results of studies undertaken in four European countries (Italy, France, The Netherlands and Hungary), which reveal the perspective of older adults and elderly regarding influenza, pneumococcal, herpes zoster vaccination and respiratory syncytial virus (RSV) as well as generic characteristics of the vaccines and diseases.

We will show how attitudes towards vaccination are represented in our study population and which determinants influence the decision-making process of accepting vaccination. Furthermore, we shall elaborate on how the decision-making process towards vaccination takes place and which additional information is needed.

In the second part of the session, we shall invite the audience to reflect on the findings and identify the factors they consider most important for setting up a training and education programme on vaccination.

Reflections on life-course vaccination: the England experience

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Since the introduction of the expanded programme on immunization in the 1970s, vaccination has evolved from being an intervention of early infancy to being a programme targeting individuals at all stages of life including birth, infancy, childhood, teenage years, pregnancy and adulthood. The UK has been at the forefront of this lifelong approach to vaccination and has introduced vaccines at all stages of life in its national schedule, including vaccination against hepatitis B at birth, Meningococcal disease group B in infancy, influenza in primary school years, Meningococcal disease groups A, C, W and Y in teenage years, pertussis in pregnancy and shingles in older adults. Based on a range of studies conducted by Public Health England, This session will reflect on some of the challenges brought on by the life course approach in the UK including issues of access in different age groups, choosing the right age and settings for vaccinations, age-specific attitudes to vaccination and subsequent communication strategies, and challenges with monitoring a life-course programme.

The EU Joint Action on Vaccination – capitalizing on existing knowledge

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Vaccine hesitancy is considered a major global public health threat. Vaccine hesitancy stands for refusing or delaying the acceptance of vaccines, and it is influenced by matters, such as the lack confidence in the system providing the vaccines, inconvenience of vaccination services and individual risk perceptions. In a European context, the lack of confidence is often put forth as major reason behind low vaccine uptake. However, it is equally important to address matters relating to the accessibility and convenience of vaccination services.

The European Council and the European Commission have made several decisions aiming to strengthen vaccine confidence and uptake in Europe. The ongoing EU Joint Action on Vaccination (EU-JAV) is delivering a number of these. As a work package leader for the actions related to vaccine hesitancy and uptake, Jonas Sivelä will talk about the importance of capitalizing on existing knowledge and practices within Europe - and the potential we have in increased cooperation between countries, regions and actors. The EU-JAV develops a systematic overview and analysis of best practices, lessons learned and experiences from vaccine hesitancy and uptake related work. Such work can encompass different types of interventions and practices, for example, training of health care workers, communication policies, or initiatives aiming to increase the accessibility of vaccination services. The EU-JAV creates mechanisms and practical tools for disseminating the knowledge about this work for actors in the public health sector in order to strengthen their possibilities to encounter vaccine hesitancy.

Designing and evaluating an information campaign on HPV vaccination in Denmark

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Vaccinating 12-year-old girls against human papilloma virus (HPV) was included in the Danish vaccination program in 2009. Since 2014 safety concerns resulted in a dramatic decrease in uptake.

In order to nuance the debate, inform parents' decision-making and increase uptake, we launched a national HPV vaccination information campaign in May 2017.

Before designing the campaign, we investigated parents' knowledge, attitudes and decision patterns regarding HPV vaccination. Results showed that 34% parents were vaccine hesitant. Mothers were the primary decision makers regarding their daughters' HPV vaccination, and their primary source of information was online media, particularly Facebook. Finally, parents had a lack of knowledge on several HPV-related facts and a high proportion requested more information before deciding on HPV vaccination for their daughters.

Based on these findings, we designed and launched an information campaign in partnership with the Danish Cancer Society and the Danish Medical Association. The campaign, ''Stop HPV - stop cervical cancer'', was given a designated website and a public Facebook page posting infographics, written case stories, short movies with cases and experts, and updates on vaccination uptake. The overall strategy was to bring back focus on preventing cervical cancer and put faces on the cancer statistics.

Following the campaign, the proportion of hesitant parents and parents against HPV vaccination had declined and 70% of parents were now in favor of HPV vaccination. The number of vaccinated girls had doubled in 2017 compared to 2016 with nearly 31000 girls receiving their first doses. However, the remaining proportion of hesitant parents indicated that they still felt a lack of information and continuously worried about adverse events. Henceforward, effort will be put into guiding hesitant parents to the website and to disseminate the campaign throughout the country by organizing information meetings for parents locally.

3.K. Round table: Liberté, égalité and fraternité in public health - A Human rights approach to Public (Mental) Health

Organised by: EUPHA, EUPHA (PMH), EUPHA (ETH)
Chair persons: Jutta Lindert - EUPHA (PMH)
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A human rights based approach to Public Health and to Public Mental health offers an opportunity to realize the right to health for all. However, a human rights-based approach to Public Health will require new inter-disciplinary approaches and an innovative frame. This frame should include the use of international human rights standards as a framework for research, policy and practice; the participation of target groups; and the enhancement of inclusion and respect for all. This workshop follows up from the Ljubljana 2018 workshop on human rights and public (mental) health and aims to test the requirements needed to ensure a human rights based approach to public health. For this, a panel of a researcher, ethicist, lawyer and a patient is set up to evaluate three practical cases. What are they advising in these specific cases and what does this mean for the international human rights framework. The outcomes of the panel discussion will be presented by the chair of the workshop.

Case 1:

Coerced sterilization in the UK

The parents of a 21-year old woman with Down's syndrome in the UK contacted a doctor to have their daughter sterlised our of fear that she may become pregnant. The woman did not have a bodyfriend nor expressed an interest in starting a sexual relationship. The parents stated that - as she had grown up - she had become more aware of the opposite sex and could be ''overfamiliar'' with people. Therefore sterilisation was needed to protect her in the future. A specialist supported the parents, but a second doctor suggested various methods of contraception as an alternative.

Case 2:

Euthanasia in the Netherlands

A 74-year old incapacitated women with dementia stated several times that she does not want to live anymore. But she has also been heard saying that she likes her life. Under Dutch law, euthanasia is possible if the patient clearly indicates this, the so-called living-will. In this case, the doctor performed euthanasia based on her living will, which was given years earlier, before she was struck by dementia.

Case 3:

Rape in Northern Ireland

A 12-year-old girl from Northern Ireland is raped. Abortion is not possible in this case due to the strict laws prohibiting abortion unless the woman's life is in danger or there is a permanent or serious risk to her mental or physical health. The girl has to travel to England under police escort to have an abortion, so that a police officer could seize the 'samples' from the procedure for evidence.

Key messages:

- A human rights based approach to Public Health and to Public Mental health offers an opportunity to realize the right to health for all.
- It is critical that we do not risk losing the right to health in the rhetoric of the SDGs and ensure that we respond to the need of improving research methods on the promise of leaving no one behind.

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3.L. Workshop: It's time for timeliness in Health Technology Assessment

Organised by: EUPHA (HTA), EUPHA (HSR)
Chair persons: Chiara de Waure - EUPHA (HTA), Carlo Favaretti - EUPHA (HTA)
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The timeliness of the release of results is one of the most critical issue regarding Health Technology Assessment (HTA) and its potential to support decision-making. This matter may reflect the deep conflict between HTA doers and users. HTA is a form of evidence-based research, expected to timely inform decision-making at several levels - from health policy (macro) to hospital and clinical management (meso and micro) - ensuring accuracy and assessment of both short- and long-term effects of a health technology. HTA purpose therefore is to respond to real world needs, while not overlook a correct methodology. Fast developing health technologies have rapidly spread over the past decades, hence increasing demand for timely assessment aimed at their prompt implementation and management, especially at meso and micro decisional levels. Furthermore, the need for quick answers is emphasized by the pressures placed on policy-makers when a health technology is publicly promoted or contested. Furthermore, an ill-timed assessment can lead to several consequences, among which possible inequalities in access to healthcare. In order to address the challenge of timeliness, organizations involved in HTA should set up models and tools to deliver timely information. The aim of this workshop is to point out the timeliness of HTA as crucial in the decision-making process as a mismanagement of HTA system could be an obstacle to an appropriate healthcare policy. Else more, the workshop would like to critically present examples where research was on time or too late to be included in the decision-making process and elaborate on possible models to successfully deal with timeliness of HTA deliverables in particular at hospital level.

Key messages:

- The timeframe of HTA should ensure the accuracy of information and of methodological and legal steps, without forgetting the timeliness of delivery.
- Models and instruments should be implemented in order to guarantee the timeliness of HTA reports.

Striking a balance between accuracy and timeliness in HTA: an elusive task

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Issue:

HTA is a decision-making tool. Users need high-quality and timely evidence to ensure sound resource allocation and timely access to innovation. High-quality HTA recommendations are time-consuming to generate, requiring high-quality evidence and timely evidence synthesis, as well as mechanisms to ensure timely recommendation release and feasible implementation of guidance.

Description of the problem:

HTA submissions, issuing recommendations and implementation guidance oftentimes have no transparent timelines, with high accuracy posing unique challenges for timeliness. We can broadly examine such challenges in the context of methodologies and processes. Accuracy ensures longer-term validity of decision-making, however, HTA should not be used only for new technologies but also revision of previous decisions through timely re-assessment, ensuring obsolete technology disinvestment.

Effects/changes:

Through the exploration of models and tools previously implemented across jurisdictions and settings, such as early-warning systems, conditional approvals and horizon scanning, it will be demonstrated that well-defined prioritisation criteria accepted by both doers and users, adequate capacity and sound preparation of stakeholders are all key elements to ensure the highest possible degree of timeliness and accuracy, and to strike a balance between the two. Particular attention will be paid to critical challenges for public health access and delivery, i.e., emerging technologies and complex interventions, highlighting how horizon scanning ought to start at the discovery, rather than development phase and transparency challenges. Technology tracking and mechanisms for standardizing methodologies and processes will also be discussed.

Lessons:

Monitoring and evaluating the impact of HTA methodologies and processes in a transparent manner needs to become an inherent part of HTA to ensure existing and future challenges of accuracy and timeliness can be adequately addressed.

Why do we need for timeliness of research in decision-making?

Judith de Jong

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Background:

Compared to the policy process, the research process is slow. As a result, research evidence is not always available when needed in the policy process. These differences in timelines between research and policy hinder the use of research evidence in the policy process. In order to support evidence-based policy making, timeliness of research is important.

Methods:

Examples are provided, e.g. where research was on time to be included in the policy process and where research was too late to be included in it. These examples are described and analysed to provide for recommendations on how to better align both processes.

Results:

It is shown that in order to create timeliness of research, policy makers and researchers should talk on a regular basis. This increases the chance that results from the research are included in policy making.

Conclusions:

Timeliness of research is important for evidence-based policy making. In order to create timeliness of research, interaction between researchers and policy makers is important.

Sharing hospital-based health technology assessments internationally

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Issue/problem:

National healthcare systems worldwide are at a critical point due to the fiscal sustainability challenges faced. At the same time, healthcare systems are under pressure to meet the global demand for adaptation of medical innovations arriving into the market persistently.

Description of the problem:

Hospitals often serve as the entry point for new technologies to the healthcare system. It is therefore extremely important that Health Technology Assessments (HTA) are available in timely order to accurately inform decision-makers on both short- and long-term effects of a health technology to avoid inappropriate investments. Hospital based HTA (HB-HTA) was developed to accommodate the need for evidence-based hospital-specific information in a timely manner. A substantial increase in the use of HB-HTA has been observed in the last years. However, only few reports are being published. A database for the structured collection of HB-HTA reports could help the dissemination and collaboration between hospitals.

Effects/changes:

A survey answered by an international group of experts knowledgeable in HB-HTA from eighteen different countries has showed that there is an interest to realize the collection and dissemination of HB-HTA reports on an international scale. However, confidentiality and resources for a database are barriers for the dissemination of HB-HTA reports. The challenge will therefore be to overcome these barriers and design a database containing high quality, comparable and complete HB-HTA reports with proper data security, regular maintenance and user support.

Lessons:

International collaboration in HB-HTA is the key to timely inform decision-makers without compromising the quality of the data or the methodology.

3.M. Workshop: Tools and opportunities for health promotion

Organised by: National Institute for Health and Welfare, Finland, EuroHealthNet, EU, JointAction ChrodisPlus, EUPHA (HP), EUPHA (INJ)Chair persons: Caroline Costongs - EuroHealthNet, Anne Lounamaa - EUPHA (INJ)
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Health promotion acknowledges the reciprocal relationship between health-related behaviours and the environments in which people live, considers that the environment is made up of different subsystems and emphasises the relationships and dependencies between these subsystems. Our workshop acknowledges the multi-faceted nature of health promotion and intends to provoke thinking, ideas and tools for health promotion to help to expand skills and knowledge to develop health promotion strategies, policies and interventions.

This workshop will offer examples and provoke discussions on how to develop, evolve and improve health promotion practices. First, an overview of the European health promotion landscape is presented. This information is based on data collection conducted in 2018 in the European Joint Action Chrodis Plus. Next, we have two interlinked presentations to describe how to institutionalize health promotion thorough legislation, assess health promotion actions nationwide, and foster development in municipalities enforced by legislation. These presentations illustrate the developments in Finland, offer examples and highlight the importance of ministerial level actions for health promotion. The nationwide benchmarking system for assessment has existed for over ten years and offers an example for other countries.

The two last presentations address specific health and well-being issues: (1) tobacco control in Portugal and Israel and (2) the promotion of older people's health and well-being in Iceland. The presentation on tobacco control is an example of inter-dependencies of different stake-holders. The presentation from Iceland will stimulate a discussion on how to start and conduct the nationwide implementation of an evidence based health promotion intervention and what the role governments, municipalities, and NGOs should be.

The workshop is a regular workshop. Time for discussion is offered in four spots, (1st) after the first presentation, (2nd) after the second and third presentations, (3rd) after the fourth and (4th) final discussion after the fifth presentation.

Key messages:

- Promising methods for health promotion exist. The challenge is how to implement effectively.
- Legislation is a powerful tool to enhance health promotion practices.

Health promotion and primary prevention in 21 European countries

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It has been estimated that chronic diseases cost EU economies €115 billion or 0.8% of GDP annually. Approximately 70% to 80% of health care budgets are spent on treating chronic diseases. There is a wealth of knowledge within EU Member States on effective ways to prevent chronic diseases and promote health and wellbeing. There is great potential to reduce the burden by making better use of this knowledge as we know that the majority of chronic diseases can be prevented, or their onset delayed.

In order to unlock this knowledge we have compiled health promotion landscape reports from twenty-one European countries involved in the Joint Action CHRODIS PLUS. This paper will present the current actions, policies, and programmes that European countries are currently undertaking in health promotion. It is based on responses to a specially designed questionnaire that asked countries to assess their good practices, identify their gaps and needs, and outline their policy contexts and capacity in relation to health promotion.

This paper makes four key conclusions: (1) health promotion across Europe receives limited attention from policy makers; (2) there is a division between medical and social approaches to health and health in all policies needs to be fully implemented more widely in more countries in Europe; (3) there is not enough funding for health promotion; (4) health promotion needs further operationalisation to facilitate easier monitoring and value assessment.

The need to develop mechanisms to share information, examples of good practice, and support for capacity development in health promotion and primary prevention is a shared goal across European countries. The Joint Action CHRODIS PLUS will lead the effort in implementing good practices, exploring inter- and intra-sectoral collaboration, and encouraging resilient and better informed investment in health promotion and primary prevention. The country reviews and this paper are a first step in that direction.

How to institutionalise health promotion through legislation?

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Legislation is a powerful tool to enhance health promotion practices. The aim of this presentation is to describe legislation related to health promotion in Finland. The Finnish Constitution (1999) and the Local Government Act (2015) stipulate every citizen's right to health and wellbeing. Concrete duties and tasks as well roles of different actors are stipulated in detail in the Health Care Act (2010) and many specific acts. General strategic management obligations and tasks of the municipalities have been defined as follows: (1) Municipalities shall assess and take into consideration any effects that their decisions may have on the health and wellbeing of residents. (2) In their strategic plans, municipalities shall identify the objectives and define the measures for health and wellbeing promotion on the basis of local needs. (3) They shall monitor the determinants of health and wellbeing, measures taken and follow-up the health and wellbeing of their residents by population groups. (4) Reports on these shall be drawn up for the municipal council once a year and a more comprehensive review on health and wellbeing shall be produced for the municipal council once during each term of office. (5) They shall assign bodies responsible for health and wellbeing promotion. (6) All departments of the municipality shall work together for health and wellbeing promotion. (7) They shall cooperate with other public local authorities, with private enterprises and non-governmental organisations.

The Health Care Act as well other acts further defines the preventive services that municipalities need to offer. In Finland we have ensured effective implementation of the legislation by number of actions. First, different stakeholders were closely involved to the law-making process from the beginning of the process. Secondly, implementation was, and is still, supported by the National Institute for Health and Wellbeing. Finally, the implementation is systematically monitored.

Assessing health promotion practice in Finland with a benchmarking tool

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The Finnish Benchmarking System for Health Promotion Capacity Building (BSHPCB) is a nationwide system developed to assess structures, capacities and actions taken to develop health promotion practices at local level. BSHPCB data is collected biannually from all Finnish municipalities in the following sectors of administration: primary healthcare, basic education, upper secondary education, vocational education, physical activity and sport, municipal management and culture.

The data collection form and reporting format are based on the theoretical health promotion capacity-building framework, which has seven dimensions that the organization should consider: (1) commitment of the organization to the promotion of population health; (2) management of health promotion; (3) population health monitoring, needs assessment, and evaluation; (4) resources for health promotion; (5) common working practices; (6) public participation/partnership in the planning and evaluation of activities and services; and (7) other core health-promotion functions. Data has been collected since 2010 and results are published on-line (www.teaviisari.fi) within two months of data collection.

The online benchmarking tool serves multiple purposes: first, it provides national actors evidence base for assessing law enforcement and drafting new legislation and developing national strategies and action plans; second it gives regional actors good understanding of municipalities' work and capacities in their region in order to support them and, third municipalities get feedback of their work, are able to benchmark their situation to similar municipalities and develop their health promotion practices. The development and use of BSHPCB has been encouraging. The coverage of the data serves a sound base for further development of the tool. The next steps involve strengthening the quality of the data and auditing practices.

Public health policy implementation and evaluation in portugal and israel (Project PH.PIE): the intersectoral pledge and the case of health literacy for tobacco control in the building of the Homo Salus

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Despite the overwhelming accumulated evidence of the negative effects of nicotine intake, the prevalence of tobacco use is not expected to decline in the near future in several countries. Israel and Portugal both signed the WHO Framework Convention on Tobacco Control (WHO FCTC) and implemented several strategies to achieve Positive Public Health Outcomes (PPHO) (e.g. policy making, legislation). Nevertheless during the past 10 years the number of smokers in Israel has decreased from 28% (in 2000) to about 20.6% (in 2017), while in Portugal, the number of smokers has not changed (2002, 19.2%). However, it has increased for women and adolescents.

The goal of PH.PIE project (Public Health Policy Implementation & Evaluation) is to document policy development and implement Health Impact Assessment (HIA) towards a knowledgeable civic society, searching for the real PPHO. Tobacco control is a selective topic because of its high relevance in public health. PH.PIE considers policy making and stakeholder analysis to comprehend HIA of strategic public health issues and PPHO.

The tobacco industry during the last 10 years has invaded the market with a comprehensive new approach, built around the concept of harm reduction and turnaround strategies to counteract WHO FCTC principles. This way, public health has apparently lost its grip from its own argumentative discourse, while several stakeholders have positioned themselves in the co-working facelift of nicotine use with smokeless tobacco, electronic cigarettes, and other forms of use that have not been scrutinized in terms of their real potential on public health terms.

Harm reduction approaches take the front line, in contrast to smoking cessation efforts as a cornerstone of WHO FCTC. We argue in this paper that health literacy can be critical tool in remaking nicotine addiction in the homo salus upbringing.

Multimodal health promotion – An approach to successful aging

Janus Gudlaugsson

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Multimodal health promotion (MHP) is especially relevant for older persons, because of their high rate of disability, functional dependence, and use of healthcare resources. The purpose of this health promotion and research project was to assess the immediate and long-term effects of MHP on functional fitness (FF), body composition (BC), health and quality of live (HQL), and cardio metabolic risk factors (CMRF).

The main objectives of the project are; 1) to promote health of older age groups so they; a) can take part in the future, both better and longer, in the activities of daily life, b) can live longer in an independent residence, c) can prevent or delay entry into residential and nursing homes, d) have the opportunity to work longer in the labor market; 2) to improve the quality of life of older age groups; 3) to reduce government and municipalities expenditures.

The MHP consisted of three 6-month periods with emphasis on daily endurance training and twice-a-week strength training. This was supported by monthly lectures with emphasis on nutrition, use of medicine in connection with training, healthy ageing, mindfulness, goal-settings in old age, endurance, strength and flexibility training, and how to train. The design was a suitable sample with baseline assessment and three 6-month MHP phases.

After each MHP phase, positive improvement was seen in FF, BC, HQL and CMRF. Males and females retained achieved changes and improved further at the end of each 6-month measurement. Our results suggest that regular MHP can improve or prevent decline in functional fitness in older individuals, reduce cardio metabolic risk factors, influence their health and lifestyle and positively affect their ability to stay independent, thus reducing the need for institutional care. MHP is feasible and beneficial in older populations as an integral part of prevention in municipalities and management of chronic age-related disorders.

3.N. Skills building seminar: Learning to assess Health Information Systems - from performance measurements to areas of action

Organised by: InfAct, EUPHA (PHMR), WHO EURO, Sciensano
Chair persons: Neville Calleja - Malta, David Novillo Ortiz - Denmark
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In order to respond effectively to population health and health systems' challenges, policies must be based on the best scientific evidence derived from sound data and information, and relevant research. Health information systems (HIS), both at national and international level, play an important role in ensuring that reliable and timely health information is available for operational and strategic decision making inside and outside the health sector. How do you know if the HIS in your country is performing well? How can you identify potential areas of action in such a complex and multi-stakeholder system? Previous research has found that there is a great need for capacity-building activities to support strategic development and assessment of HIS.

The World Health Organization (WHO) Regional Office for Europe has created a practical support tool to assist Member States in assessing and developing their national HIS and eHealth systems. The tool covers the domains of resources, indicators, data sources, data management, national HIS data quality/information products, and dissemination and use. Currently, the tool is being used by nine countries in the Joint Action on Health Information (InfAct) to peer review each other's HIS in rotating groups of three countries.

This skill building seminars will start with two presentations to set the scene. First, an introduction will be given on the concepts of a HIS and its core elements, the WHO assessment tool and its current format. Second, experiences will be shared on using the support tool. Thereafter, the participants will choose a domain of the HIS tool in which they are particularly interested and will be split into groups. Each group will carry out a mock exercise of the chosen domain of the tool for their own country. They will identify strengths and weaknesses, and exchange experiences among members of the group on how these have potentially been addressed. Each group will be guided by an expert in the domain with prior experience with the tool. Additionally, based on previous experiences with the tool, a set of commonly found strengths and weakness, followed by recommendations will be prepared to support the group discussions. The skill building session will end by having each group report in a plenary format. The experts from each domain will reconvene in a panel and provide feedback to the strength and weakness, and recommendations that were identified during the group discussions.

Through this skill building seminar, participants will have a clear picture of what a HIS entails. They will be familiarised with an existing HIS assessment tool and how it has been used. Through guided group discussions, they will be able to identify potential elements of action in a specific domain and cross-fertilise with other participants and experts on ideas how to address specific challenges. Finally, they will learn about common strengths and challenges in HIS across Europe.

Key messages:

- Health information from strong health information systems can help Member States identify areas for action to reduce health inequalities, improve health and support the evaluation of measures taken.
- The specific needs for capacity building to run a health information system (HIS) on national, regional or even local level has long been neglected. HIS assessments are one element to close this gap.

The WHO support tool: how is it used and what kind of adaptations are needed?

Nicole Rosenkötter

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Issue and method:

In December 2013, the Standing Committee of the Regional Committee for Europe asked the WHO Regional Office for Europe (WHO EURO) to develop a practical tool for Member States that provides assistance in developing and improving national health information systems (HIS) through the development of a national health information strategy.

The developed tool, the Support Tool, was informed by existing tools developed earlier by WHO's Health Metrics Network and was adapted for the planned assessments in the WHO EURO region. The Support Tool was published in 2015 and was used until now for nine national HIS assessment missions.

Results:

By using the Support tool all dimensions of a HIS are assessed: the general resources needed, the indicators used, the data sources available, the applied data management procedures, data quality, and the dissemination process and use of the HIS outputs. The Support Tool structures the assessment process and supports the identification of strength, weaknesses, opportunities, and challenges that inform HIS strategy development in the second stage.

Lessons:

So far, the application of the Support Tool had a strong focus on the assessment stage. It turned out that it is necessary to develop a joint understanding of what a HIS entails. The Support Tool offers great potential to start a structured dialogue with all actors linked to the HIS including policy makers. The assessment provides an opportunity for HIS strengthening and the development of a joint understanding. However, it turned also out that further adaptations of the assessment content are needed to better cover topics prevalent in European HISs, like electronic health records, modern IT-resources, modern reporting approaches, and knowledge translation.

The WHO support tool: what can you learn and how have others experienced it?

Petronille Bogaert

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Issue and method:

Health information systems (HIS) in Europe are complex and involve multiple stakeholders. To strategically assess HIS, a support tool has been developed by the WHO Regional Office for Europe.

It has been applied in nine countries by WHO Europe since October 2015. Additionally, nine countries are using the tool in a peer review format within the context of the Joint Action on Health Information (InfAct) between January and December 2019. What can you expect to find out during such an assessment? What are countries commonly struggling with? In this presentation, the wealth of experiences using the support tool will be shared and participants will learn about common strengths and weaknesses in HIS across Europe.

Results:

While each country possesses a unique HIS, common strengths and challenges emerge from across assessments. A few major ones will be presented in this session. In many countries promising e-health developments are ongoing such as electronic health records, e-prescription and cloud solutions for data storage. There is a clear desire to shift towards e-health technologies which is a real opportunity. However, well-developed step-wise approaches in interaction with key players are sometimes lacking and sustainability in financing can be of concern. Central multisectoral coordination mechanisms are often lacking, leading to inefficiencies in bringing together data and information, and in the use of financial and human resources. Finally, in many cases data is available, but legal aspects (e.g. impact of General Data Protection Regulation) are limiting the exchange and linkage possibilities for research and monitoring.

Lessons:

HIS assessments help to determine common strength and challenges. By sharing common experiences, participants are better prepared to face common hurdles in their country and will have been exposed to good practices on how to address these.

3.O. Workshop: Social-to-biological processes over the lifecourse and social inequalities in health

Organised by: French National Institute of Health and Medical Research
Chair persons: Michelle Kelly Irving - France, Marc Chadeau-Hyam - France
Contact: michelle.kelly@inserm.fr

Context:

Socioeconomic inequalities in health and ageing are observed across contexts and over time, presenting a challenge for public health. The mechanisms driving associations between social conditions and health include biological responses, which in turn are associated with health outcomes. This workshop aims to describe and discuss evidence on the biological embedding of the social environment from research carried out within a large European consortium, and place it within the context of public health.

Methods:

The Lifepath project was funded by the European Commission between 2014-19 and brought together longitudinal datasets from across Europe, as well as an interdisciplinary collective of researchers keen to examine how social inequalities in health are constructed over the lifecourse. **Results:** Four separate studies are presented here. First, Carmeli et al examine the relationship between social position and systemic inflammation through the mediating role of gene regulation. Second, Fraga et al describe the social patterning of chronic inflammation observed in early adolescence. Third, Castagné et al analyse the relationship between social position across the lifecourse and systemic inflammation, and the role of inflammation within the allostatic load heuristic. Fourth, Chadeau-Hyam et al describe social gradients in a multi-system biological health score, and its subsequent relationship with a number of major health outcomes.

Discussion:

We will coordinate a discussion between the audience and workshop participants. The contribution of the inflammatory system to capturing social inequalities and in its association with chronic disease will be discussed. Is it a key player in the construction of health inequalities, or merely an effective signal for many diverse processes? The role biological markers can play in enhancing our understanding of health inequalities, and how the public health community can respond to the evidence will be discussed.

Conclusions:

Socially patterned biological responses begin early in the lifecourse and may be key factors in the construction of social inequalities in health and ageing. As such, they should be taken into account in public health activities and policy.

Key messages:

- The biological embodiment of social conditions is observed from early life and across the lifecourse.
- Systemic inflammation appears to be a central mechanism which is socially patterned and associated with many health outcomes.

Early life socioeconomic position and adult systemic inflammation: the role of gene regulation

Cristian Carmeli

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Background:

Adverse socioeconomic conditions in childhood affect systemic low-grade inflammation in adulthood. Studies in animals and humans suggest that socioeconomic conditions get under the skin from early life thus contributing to shape pro-inflammatory phenotypes. Although the existence of socioeconomic differences in gene regulation of the immune function have been described previously, no study has so far assessed the extent to which these differences actually explain socioeconomic variations in inflammatory markers.

Methods:

First, we ran 2-sample Mendelian Randomization (MR) methods to identify putative genes whose expression drives C-reactive protein (CRP) levels in blood. We used two databases with summary statistics of associations between single nucleotide polymorphisms and gene expression (eQTLGen, N = 31,486 individuals) and CRP (CHARGE, N = 148,164 individuals) in blood. We tested 10,701 genes and retained those with FDR<0.05. Second, we used individual-participant data from a Swiss population-based study (SKIPOGH, N = 723) to estimate the proportion of the effect of paternal occupational position (SEP) on low-grade inflammation in adulthood (CRP>3mg/L) mediated by the selected genes. We estimated odds ratios and mediated proportions through counterfactual-based mediation models.

Results:

We identified 426 genes driving CRP levels (robust to unmeasured confounding thanks to MR). They jointly mediated the effect of low father's occupation on inflammation in adulthood for a proportion up to about 70% [95% confidence intervals (CI) 11-90%] and with an odds ratio of 1.53 [95% CI 1.05-2.15] compared to individuals with high paternal SEP. Analysis of the effects of life-course SEP trajectories (upward, downward and stable low from paternal to adult SEP) on gene regulation revealed trajectory dependent effects.

Conclusions:

We suggest that adverse childhood SEP affects systemic inflammation in adulthood through a long-lasting effect on gene regulation.

Parental socioeconomic position and chronic inflammation during adolescence

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Background:

Early life adversity has been associated with increased risk of inflammation and inflammation-related diseases in adulthood. This study aimed to examine the association of parental socioeconomic position with chronic inflammation over adolescence.

Methods:

We used information on 2942 members (1507 girls and 1435 boys) of the EPITeen cohort that was established in 2003 in Porto, Portugal, and included 13 years old adolescents that were further evaluated at 17 and 21 years. Mother' and father's education and occupation were used as indicators of parental socioeconomic position. High-sensitivity C-reactive protein (CRP) was measured at three points in time (13, 17 and 21 years). CRP levels were categorized in tertiles separately for each wave; chronic inflammation in adolescence was defined as having CRP levels in the highest tertile in at least 2 waves and never in the lowest tertile.

Results:

Over adolescence, the prevalence of chronic inflammation was significantly higher among participants with low parental socioeconomic position. Low parental socioeconomic position was associated with chronic inflammation in adolescence, after adjustment for sex, perinatal and physical environment factors, health-related behaviours and health status in adolescence OR = 1.63; 95%CI: 1.11, 2.40 for lowest vs. highest mother's education and OR = 1.61; 95%CI: 1.12, 2.30 for lowest vs. highest father's education.

Conclusions:

Low parental socioeconomic position is associated with chronic inflammation during adolescence. Our results suggest that the early life socioeconomic environment has an impact on inflammatory processes over adolescence.

Social patterning of inflammation over the lifecourse and its relationship with mortality

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Background:

This study explores (i) the relationship between socioeconomic position (SEP) across the life course and circulating C-reactive protein (CRP), a marker of systemic inflammation, in 6 European cohort studies (in up to N = 23 008) participating in the Lifepath project and (ii) interrogate the hypothesis of a cumulative biological risk (allostatic load, AL) reflecting 4 physiological systems, including inflammation, potentially predicting future risk of death in one of the cohort.

Methods:

First, we estimated the association between measures of three time point SEP and adulthood CRP, adjusting for health behaviours and body mass index (BMI). To mimic life course experiences, we sequentially adjusted for the chronologically ordered measures of SEP. Next we used mortality data from the 1958 British birth cohort to operationalise AL from 14 biomarkers collected at age 44. Multivariate Cox proportional hazards regression was used to estimate hazard ratios for the association between AL, biological sub-scores and individual biomarkers with mortality.

Results:

Educational attainment was most strongly related to inflammation where low educational attainment was associated with higher log-transformed levels of CRP ($\beta = 0.30$, (0.22-0.38)). Higher AL at 44 years old was a significant predictor of mortality 11 years later (HR = 3.56 (2.3 to 5.53)). Among the four physiological systems, only the immune-inflammatory and cardiovascular sub-scores were significantly related to mortality.

Conclusions:

Socioeconomic circumstances across the life course are associated with higher levels of inflammation in adulthood which in turn predict subsequent risk of death. But our findings also suggest that the cumulative AL measure consisting of all the biomarkers was a better measure for predicting death adding evidence on the biological embodiment in response to chronic stress, suggesting that social-to-biological processes are at play, beyond the impact of health behaviours and BMI.

A socially patterned Biological Health Score and mortality in Understanding Society and UKBiobank

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Background:

It now established that social factors impact the quality of ageing, through the lifecourse stimulation/dysregulation of key physiological systems. Composite scores such as allostatic load, focusing on the response to stress, can be used to measure individual physiological wear-and-tear.

Methods:

Using data from the Understanding Society study, a cross-sectional panel study including 9,088 participants representative of the UK population, we defined a synthetic biological health score (BHS) capturing the wear-and-tear of four physiological systems (endocrine, inflammatory, cardiovascular, and metabolic systems), and of two key organs (liver and kidney). We used 16 established blood-derived biomarkers of these systems to calculate the BHS and explored the relative contribution of socio-economic position to the BHS and its main components across age groups. Using data from UK biobank, including over 400,000 UK participants in whom similar biomarkers have been assayed in blood, we sought validation of our results and investigated the role of the BHS on all-cause and disease specific mortality, and disease incidence.

Results:

We identified a systematic decreasing education-related gradient of the BHS ($p < 0{\cdot}001$) leading to lower biological risk in participants with higher educational attainment. Education-related differences in the BHS were detected early in life, and were not attributable to lifestyle and behavioural factors. Analyses of the UK biobank data validated these findings and also showed that the BHS contributed in turn, irrespective of established health risk factors, to all-cause and disease specific mortality.

Interpretation:

Our findings highlight the social-to-biological processes ultimately leading to health inequalities, and suggest that such disparities can already be detected in the 20-40 year age group.

3.P. Workshop: A methodology for monitoring population health literacy in Europe – the HLS19 project

Organised by: EUPHA (HP), Austrian Public Health Institute
Chair persons: Jürgen M Pelikan - Austria, Dietscher Christina - Austria
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Health literacy (HL) is a critical determinant of health (WHO-Shanghai Declaration, 2016), i.e. of healthy life styles, of indicators of health status and of use and results of health care services. For Europe the European Health Literacy Survey (HLS-EU) in 2011 demonstrated, that a considerable proportion of general populations in the researched 8 European countries (and in more countries in later surveys) had limited health literacy and that there was a considerable social gradient of health literacy. The HLS-EU study also showed that HL impacted certain health risks, important indicators of health status and of use of professional health services. But besides these general trends for all researched European countries, there existed considerable variations in distributions and associations of health literacy between the researched countries.

Thus, since knowledge on health literacy of populations is relevant for planning health policy, the Solid Facts - Health Literacy of WHO-Europe (2013) recommended regular monitoring of population health literacy by standardized procedures. Since HL now is understood as a relational concept, HL can be measured on a personal or an organizational systems level. Also measures to improve HL can try to improve personal HL by offering better opportunities for learning or by developing Health Literate Organizations or settings to be more sensitive to personal HL of their users and be less demanding and more supportive for users.

Therefore in 2017 the Action Network on Measuring Population and Organizational Health Literacy (M-POHL) was initiated under the umbrella of the European Health Information Initiative (EHII) by WHO-Europe. M-POHL from its beginning combines a policy with a research agenda. About 25 member states of WHO-Europe already joined M-POHL. As a first project the European Health Survey 2019 (HLS19) is ongoing with 15 countries participating.

The workshop will inform about the vision and mission of M-POHL, about the methodology of the on-going HLS19 survey and about the way selected countries are using monitoring of HL for their health policy. Following 5 short inputs (60′), including two more general ones M-POHL and HLS19 and three on perspectives from countries, participants will have the opportunity (30′) to ask questions and discuss what M-POHL and HLS19 means or could mean for health policy of their country and their personal research or policy interests.

Key messages:

- Health literacy is a critical determinant of health which has to be monitored for general populations in all countries of WHO-Europe as a basis for national and European health policy.
- The Action Network of Measuring Population and Organizational Health Literacy (M-POHL) of WHO-Europe has started the Health Literacy Survey 2019 to provide data for evidenced-based health policy.

A methodology for monitoring population health literacy in Europe – the HLS19 project

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Health literacy (HL) matters for health of people and for use and results of health care. Therefore knowledge on HL is relevant for evidence based health policy. But there is evidence on considerable variation of distributions and associations of HL between European countries. Furthermore HL is impacted by health promotion and health care policy interventions. Therefore it makes sense to monitor HL in each European country on a regular basis in a standardized form that allows for benchmarking between countries. A first European Health Literacy Survey (HLS-EU) in 2011 in eight member states supported by the European Commission introduced measurement of population HL in Europe. Based on the results of this survey WHO-Europés ''The Solid Facts - Health Literacy'' (2013) recommended institutionalized regular measurement and monitoring of HL.

To implement this recommendation in 2017 the Action Network on Measuring Population and Organizational Health Literacy (M-POHL) was initiated under the umbrella of the European Health Information Initiative (EHII) by WHO-Europe, with already 25 countries participating. From its beginning M-POHL combined a policy with a research agenda and developed a documents on it vision and mission: The Vienna Statement on the measurement of population and organizational health literacy in Europe (2018).

As a first project the European Health Literacy Survey 2019 (HLS19) has been planned and implemented. Based on the comprehensive concept and definition of population HL and the design and questionnaire of the HLS-EU study a common study design and a further developed instrument has been developed by representatives of 15 participating countries. Most import measurement of digital HL has been included into the HLS19 study and a new short form HLS-Q12 of the HLS-EU47 has been constructed. The presentation will give an overview on the research questions, the design and the instruments, the pretesting and the data collection of HLS19.

Using data on population health literacy as a basis for evidence-informed health policy

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An increasing body of evidence suggests that health literacy (HL) is relevant for health-related decisions in relation to treatment, prevention, and health promotion and, consequently, for health and health care outcomes. At the same time, data illustrate that huge proportions of populations in many countries are concerned by low levels of HL. The improvement of HL should therefore be an issue of concern for health policy. In the sense of ''what doesn't get measured doesn't get done'', internationally comparative data on HL - like those provided by HLS-EU (2011) - can provide important guidance for health policy and administration on where best to intervene. Austria is one of the eight countries that participated in HLS-EU. According to the data analysis, the percentage of the Austrian population affected by low levels of HL came second-to-last in the survey. This was a wake-up call for Austrian health policy, and numerous activities were initiated as a result.·

In 2012, Austria launched a national health target on improving population HL. Since 2013, specific objectives to improve HL have been integrated into the ongoing national health care reform process. In 2015, a national HL alliance was launched to coordinated activities. Today, the alliance has 5 defined program lines that are in huge parts inspired by the analysis of HLS-EU data, and Austria will participate in the next European HL survey starting in Autumn 2019 to get new data.

The examples of other countries - including those represented in the workshop - confirm the importance of internationally comparative data to trigger national attention and to start coordinated action on HL. According to the Austrian experiences so far, data analysis can support evidence-informed action in defined fields of activity. To remain active in a continuous and systematic way requires national capacity-building as well as the identification of and collaboration with stakeholders across sectors.

Using survey data on population health literacy for developing a National Action Plan in Germany

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Promoted by the results of the European Health Literacy survey, the first representative German Health Literacy Survey (HLS-GER) was conducted in 2014. The results showed that every second individual in Germany (54.3 %) has limited health literacy. Thus, a majority of the German population is confronted with difficulties in finding, understanding, appraising, and applying health information. Particularly, vulnerable groups as people with migration background, low education attainment, and in older age as well as chronically ill have even more problems in processing health information and thus are confronted with challenges to maintain health, prevent diseases and use the healthcare system.

Based on the initial research findings of the HLS-GER and the increasing attention and discussions arising with its results, the National Action Plan Health Literacy was developed by a group of experts to systematically improve and strengthen health literacy in Germany. After agreements with representatives of politics and society, health professions and patient and citizen organizations it was published in 2018. It includes 15 specific recommendations in four areas of action and focusses on fostering health literacy in daily life, creating a user-friendly and health literate healthcare system, HL and chronic illness and expanding health literacy research. Five underlying key principles are mentioned to consider in implementing the National Action Plan. The HLS-GER survey data were further used to discuss some recommendations within specialized workshops leading to more detailed strategy papers. The current political and practical developments and discussions initiated by National Action Plan, will be picked up in the second German Health Literacy Survey (HLS-GER2), which is part of HLS19. By repeatedly assessing population HL in Germany the implementation of the National Action Plan can be monitored and further specified, thus survey data help to create policy.

WHO Action Network on Measuring Health Literacy: the Italian pilot for the Survey 2019 Title

Luigi Palmieri

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Background:

Health Literacy-HL is an important determinant to improve and maintain health and quality of life during life course. HL implies people's knowledge, motivation, competencies to access, understand, appraise, apply information to make judgements and decisions in everyday life concerning healthcare, disease prevention, health promotion. Thanks to Ministry of Health funds, Italy joined the WHO Action Network on Measuring Population and Organizational Health Literacy-M-POHL for collecting comparable data on HL in order to measure and promote citizens' HL among MS.

Objective: The HLS-EU-Q16 questionnaire was administered to a sample of adult population during the Health Examination Survey-HES of the CUORE Project started in 2018, to verify and evaluate the feasibility of the HL survey.

Methods:

One hundred people aged 35-74 years, resident in Reggio Calabria (South of Italy), were interviewed (face-to-face) following consecutive access to the HES. According to the HLS-EU-Q16 sum score, three levels of HL were defined: inadequate, problematic, and sufficient. HL mean score and standard deviation-SD were elaborated together with prevalence of the three HL levels. Socio-demographics conditions, lifestyles, risk factors were measured during the HES.

Results:

HL mean score of 98 completed questionnaires (47 men, 51 women) was 13.0 (SD = 3.5), with no sex difference; prevalence of persons with inadequate HL was 11.2%, problematic 26.5%, sufficient 62.3%. Sufficient HL level presents the highest prevalence (72%) of high educational level. Smoking habit decreases as HL level increases.

Conclusions:

The HLS-EU-Q16 questionnaire represents a standardised tool applicable in the general population. Preliminary results from the Italian pilot of the HLS-EU-Q16 suggest that the survey is feasible within the HES of the CUORE Project, with the opportunity to link HL data with HES measured data. More than one third of interviewed adult population have inadequate/problematic HL.

Italian participation to the WHO action network on measuring health literacy: policy implications

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Issue:

Health literacy (HL) is recognized as a determinant, mediator or moderator of health and of use and results of health care services Inadequate HL is associated with patient disengagement, inappropriateness of care, increased health care costs, and higher mortality rates.

Description of the problem:

Few previous studies suggested that inadequate HL is a prevailing problem in Italy. As compared with the European Countries, Italy has peculiar characteristics of socio-demographic determinants of HL levels, which constitute a challenge for policy making. In so far HL has not been considered as a strategic priority for the Italian National Health Service. The Italian National Institute of Health and Ministry of Health are promoting a national program on HL by adhering to the WHO action network on measuring population and organizational health literacy (M-POHL). Main aim of the program is to propose policies that could enable all citizens to share the benefits of improved HL. A national population survey, coordinated at European level, has been planned in each participating country in 2019.

Preliminary results:

We are setting up the survey using the questionnaire with 47 specific questions about HL and 32 about lifestyles and demographic characteristics. Updated results of this survey will be analysed in order to define a strategic line for the implementation of actions for the improvement of HL in the next National Prevention Plan. Furthermore, the national survey will be scheduled and repeated to monitor results.

Lesson State:

Policies can be implemented at individual, community, organization or system level. Italy is at the beginning of its experience in this field. A national steering committee of experts has also been appointed to support HL policy initiatives. The comparison with existing policies in other countries within the M-POHL action will be another asset to develop HL policies and related activities to benefit citizens, patients and communities.

3.Q. Skills building seminar: How to make the case for advocating for investment in wellbeing and health equity

Organised by: EUPHA, WHO Collaborating Centre Investment for Health and Wellbeing, WHO EURO, WHO RHNChair persons: Natasha Azzopardi Muscat - EUPHA, Francesco Zambon - WHO EURO
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Current investment policies and practices are unsustainable, resulting in high costs to individuals, communities, countries and our planet. Substantial evidence demonstrates that investing in evidence-informed, cross-sector, fair public policies and interventions brings multiple benefits, which drive social, economic and environmental sustainability. Making the case and advocating for investment in wellbeing and health equity is essential to enable evidence-informed sustainable and fair policy and action for the benefit of people, communities, societies, the economy and the planet. This skills building seminar intends to focus on the practical approaches, methods, considerations and examples of how to make the case for sustainable investment in wellbeing and health equity.

Specific objectives include:

- Improve understanding and build skills for making an 'investment case'
- Help key stakeholders, advocates, civil servants and other health/non-health professionals to inform, influence and shape national / sub-national investment policies and practices
- Provide an overall picture as well as an insight into the key stages, stakeholders, resources and skills needed to develop an advocacy product (report/infographic/etc.)
- Highlight the use of health economics, especially new methods and tools to capture the value (returns) to society, economy and the planet - the Social Return on Investment (SROI)
- Share practical experience of advocating for, driving or implementing sustainable investment / finance approaches for health and equity
- Support the implementation of the Sustainable Development Goals (2030 Agenda) and the WHO European Health Equity Status Report Initiative in the European Region.

The seminar will consist of two in-depth presentations, having a ''how to...'' focus. This will be followed by a panel discussion, sharing experiences and insights and showcasing examples of approaches used, practical aspects and considerations of the 'investment case'. The discussion will include key elements of evidence mobilisation and synthesis; project planning and key stakeholder involvement; using health economics methods and tools; communicating and advocating effectively, using data and visualisation; and assessing and enhancing impact. We will try to look 'behind the scenes' in order to improve knowledge, understanding and capacity about user needs; the routines involved and the techniques, skills and resources required; and why would policymakers listen; and what would make them listen and act.

There will be continuous audience engagement through live polling (e.g. Mentimeter) and Q&A time.

Key messages:

- Evidence-informed rights-based investment for wellbeing and health equity brings social, economic and environmental returns, driving sustainable development and prosperity for all.

- Advocating for sustainable investment policy and action requires a systematic process of evidence synthesis, stakeholder involvement, impactful communication, monitoring and evaluation.

Step-by-step process of making the case for sustainable investment in wellbeing and health equity

Mariana Dyakova

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Issue:

Urgent action is needed to address the growing health, inequity, economic and planetary challenges that threaten the wellbeing of present and future generations. Business as usual has proven unsustainable with high human, social, economic and environmental costs. Coordinated policy action on the determinants of health combined with well-designed and implemented governance and innovative investment approaches can have a dual effect: a) reducing the health gap; and b) improving overall population health.

Description:

The WHO Collaborating Centre on Investment for Health and Wellbeing has developed a practical step-by-step guide, outlining the process of how to synthesise, translate and communicate public health and economics evidence into policy and practice, in order to make the case for investment in wellbeing and health equity. It aims to: 1) prevent disinvestment in health; 2) increase investment in prevention / public health; and 3) mainstream cross-sector investment to address the wider determinants of health and equity, driving prosperity for all.

Building on the Knowledge-to-Action framework and an extensive international multi-disciplinary consultation, four key phases are described: 1) Project scoping and planning; 2) Evidence gathering, synthesis and design; 3) Dissemination and communication; and 4) Monitoring and evaluation. Key messages, different products and a number of practical tools and tips are highlighted. An essential element is using health economics approaches and tools to build the case, showing the burden of inaction in parallel with available sustainable solutions, which can bring 'social return on investment'.

Results/Lessons:

The result of the above-described process is the development of evidence-informed, context-tailored advocacy documents and tools, enabling healthy policy- and decision-making across different sectors, levels of government and country settings.

Tools and approaches towards sustainable investment for health equity

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Issue:

The drive to deliver better results for the economy and for society is challenged by the daily pressures faced by policy makers to contain the public expenditure while delivering improved outcomes. This is evident also in the health sector where costs are perceived to be spiralling. As a result, the sector faces huge pressure to cut budget and services. On the other hand, the health sector is a minor contributor towards health equity, as social, economic and environmental determinants of health are mostly responsibility of other sectors. Health equity and well-being are outcomes of societal values, culture and policy choices, that create the conditions for prosperous lives for all, leaving no one behind.

Description:

There are different approaches and tools that can be used for advocating, planning and monitoring investments for health equity. To name a few that the health system can introduce: mainstreaming equity into health services, employment, procurement and purchasing practices for better social and economic benefits; Health Equity Impact Assessment that supports implementation of Health Equity in All Policies and Agenda 2030; voluntary national review reporting on SDGs - all stressing the need for disaggregation of data, new evidence and methods, and monitoring.

Results/Lessons:

Health equity is a complex issue that needs comprehensive response combining various approaches and tools in advocating, planning, implementing and monitoring. Besides situation analysis, more and more WHO Member States are requesting evidence about what works and how to do it. Therefore, tailor made assessment, solution development and monitoring is becoming a standard. This needs to be supported with continuous training and capacity building. WHO European Office for Investment for Health and Development developed a Health Equity Status Report and a flagship course on Equity in Health in All Policies, built on the latest evidence and tailored to country / community needs.

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4.A. Health disparities

Visualising the complex relationships between ethnic group and health in Scotland: 2001-2013

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Background:

With growing numbers of migrants worldwide, accurate data are needed to assess the health of migrants and ethnic minorities, highlight inequalities and evaluate relevant policies and actions. To summarise and reveal the complexity of the findings, we developed data visualisation techniques based on epidemiological principles.

Methods:

We used published results from the Scottish Health and Ethnicity Linkage Study (SHELS), a retrospective cohort of 4.62 million people linking census ethnicity data to health service and death records during 2001-2013. In tables mainly using rate ratios, we employed different colours to show health advantage, disadvantage or equivalence; different colour shades to represent degree of certainty, combining effect size and precision of estimate; and different font sizes for absolute rates, to highlight more common conditions. We ranked health conditions by age-adjusted rate within each ethnic group to show differences in burden of disease and disease priorities.

Results:

Using 30 health outcomes for up to 11 ethnic groups, we show that ethnic differences vary greatly depending on outcome, sex and ethnic group. The patterns are complex with some ethnic groups showing strong advantages for some outcomes and strong disadvantages for others. Using absolute rates highlighted differences in common conditions such as myocardial infarction, COPD, and falls. Ranking conditions within ethnic groups showed that most ethnic groups have largely similar disease priorities.

Conclusions:

Our approach helps reveal and interpret the complexity of ethnic health differences. Simplistic generalisations that the health of migrants or ethnic minorities is worse or better than majority populations are often misleading and best avoided. Using absolute rates and ranking conditions within ethnic groups are useful as large relative differences in disease rates between ethnic groups may not translate into different disease priorities.

Key messages:

- Statements that the health of migrants or ethnic minorities is worse or better than majority populations are often misleading and best avoided.
- Large relative differences in disease rates between ethnic groups may not translate into different disease priorities.

Mobile clinic approach towards hard-to-reach populations' health in Roman suburban settings

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Among other vulnerable populations, Sinti and Roma ethnicity people are the ones more likely living in precarious housing conditions such as settlements, especially in Roman suburban and deprived neighbourhood. These hard-to-reach communities usually present poor health outcomes and reduced life expectancy. Since 2016, the project Nontiscordardimé (a partnership of Bambino Gesù Children's Hospital, OSA Health Workers Cooperative and Vicariatus Urbis) provided 3 outreach per week in two different peripheral settings ensuring to children specialized visits, nutritional screening, growth monitoring and vaccinations by means of a mobile clinic. When necessary, second level examinations have been arranged in the hospital. Personal data, detected pathologies and services provided have been collected from January 2016 to December 2018.

Main diseases detected during 2.226 examinations in Gipsy settlements were respiratory infection (26,3%), skin infection and parasitosis (13.3.%). Moreover 7,5% of visited children had malnutrition and 3,4 % presented oral hygiene related issues. Only 40% of planned second level examination and only 51% of planned hospital admission have been carried out. During outreach in parishes of suburban areas, 1.411 examinations have been performed, encountering mostly respiratory disease (30%), asthmatic bronchitis (8%), dermatitis (5,8%) and allergic rhinitis (3,8%). Adherence to hospital examination and admission reach respectively 72% and 85%.

Poor housing, isolation and overcrowding are significant barriers to prevention and health care even if the national health system provides universal coverage, and free care. Indeed disease prevalence in gipsy settlements was mainly related to socio-economical and housing condition (poor hygiene, overcrowding) whereas others peripheral urban setting, even when deprived, showed an epidemiological framework close to the general population where asthmatic and allergic disorders are prevalent.

Key messages:

- Mobile clinics can close the gap between health services and disadvantaged children and hard-to-reach populations.
- Outreach can be a mean of promotion, prevention and health services inclusion.

ED visits and hospital admissions of foreigners for psychiatric disorders in Rome from 2007 to 2018

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Background:

First generation immigrants are at high risk of psychiatric disorders (PD). Moreover, cultural and migration related factors can act as barriers in the access to care. The aim of this study was to analyze the emergency department (ED) visits and the subsequent admissions to Umberto I, a large teaching hospital in Rome, for PD from 2007 to 2018 and to highlight the differences between Italian citizens and foreigners.

Methods:

Adult patients were divided in 11 Nationality Groups (NGs). Basing on ICD9 codes, PD were classified in 5 categories: psychotic, mood, anxiety, personality and substance abuse disorders. Descriptive statistics were conducted for gender, age, educational level and triage. Poisson regression models, adjusted for sociodemographic variables, were used to estimate incidence rate ratios (IRRs) of different NGs, both for visits and hospital admissions, for the five psychiatric categories and for PD as a whole.

Results:

In the period of interest there were 11,965 ED visits for PD, of which 19.2% made by foreigners. Compared to Italians, all NGs showed higher percentages of ED visits for PDs, except for Southern Asian (SA) and East-Southern east Asian (ESA); SA and ESA, together with Other Africa population, showed also higher proportion of psychosis. Regarding admissions, ESA had the highest percentage overall, while more than half of foreigner nationality groups had higher percentages of admissions for psychosis than Italians. Poisson regressions showed that only EU citizens have greater risk of ED visit (IRR 1.69, IC95% 1.46-1.96) and of hospital admission for PD (IRR 1.23, IC95% 1.02-1.49) than Italians, while Romanians, SA and ESA have lower risk.

Conclusions:

Different risk in ED visits for PDs among NGs can be due to heterogeneity in psychopathology, cultural factors, barriers, and migrant status. More studies are necessary to better understand the needs of foreigners and to enhance their mental health service use.

Key messages:

- The risk of ED visit and hospital admission for psychiatric disorders differ among foreign populations.
- Different study design are needed to understand which cultural and migration related factors influence the risks, in order to provide more tailored mental health services for high risk populations.

Sleep problems among immigrants

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Background:

The prevalence of insomnia has increased from 11.9% to 15.5% between 2001 and 2011. At the same time, there has been a strong increase in immigration, and today immigrants constitute about 14% of the population. However, we do not know if these increases are related. There is limited information about immigrants' mental health problems, and more specifically, their sleep problems. There is an established association between low socioeconomic status and higher chance of experiencing sleep problems, and we aim to investigate if this also is the case for immigrants in Norway, and whether being an immigrant is a risk factor.

Methods:

Using the Living Conditions Survey for Immigrants 2016, we conducted logistic regression analyses to investigate associations between sleep problems and socioeconomic status among immigrant groups. We also preformed analyses comparing the results for immigrants as a whole and the majority population.

Preliminary results:

The analysis indicates a strong relationship between socioeconomic status and sleep problems for immigrants and the majority alike, but also a strong moderating effect of being in the majority population. Women have higher odds of experiencing sleep problems than men, but the odds are much higher for immigrant women than for majority women. When taking origin country into the analysis, we see that only 3 of 12 countries have significantly different odds than the majority. Men from Iraq and Iran have particularly higher odds, while Eritrean women have lower.

Conclusions:

Sleep problems are associated with other mental health problems, unemployment, substance abuse and increased mortality. Our finding, that immigrants have higher odds of sleep problems, is something medical professional and teachers should be aware of. Several barriers need to be addressed to increase the level of help seeking. This includes enhanced access of health information, and availability of mental health services.

Key messages:

- Immigrants have higher odds than the majority population for experiencing sleep problems, also when controlling for socioeconomic status.
- Immigrant women are particularly exposed to sleep problems, although there are considerable variations according to country of origin.

Immigration status and cervical test screening: more underscreening and inequality social health

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Introduction:

In France, public health authorities recommend cervical cancer screening (CCS) by a Pap test every 3 years for all sexually active women aged 25 to 65 years. Socioeconomic inequalities are observed in CCS and disparities in screening practices according to immigration status has been reported. The aim of this study was to compare income inequalities in cervical screening depending on immigration status.

Methods:

The study was based on the 2012-2016 baseline data in the Constances cohort (N = 28905 women). Delayed CCS was defined by having last CCS for more 3 years. The main independant variables were monthly household income and immigration status. The women's origin was divided into the following categories: French women born to two French parents (French origin), French women born to at least one foreign parent (immigrant origin), and women born to two foreign parent (immigrants). Immigrants were divided into two categories: women with French or not nationality (naturalized or foreign immigrant). The slope index inequality (SII) was computed to measure the income inequality in CCS non-adherence. Interaction test was used to compare SII depending on immigration status. We used imputation model.

Results:

We confirmed the existence of a gradient with respect to migration origin for delaying CCS (21,9 % women of French origin, 26,5 % women of immigrant origin, 28,8 % immigrant, $p < 10\text{-}4$). More income inequalities were observed depending on immigration status (SII French origin = 0,17 [0,16-0,18], SII immigrant origin = 0,28 [0,24-0,32], SII immigrant = 0,27 [0,25-0,31], p interaction <0,001). Among immigrant women, we observed difference in social inequalities depending on French nationality (SII naturalized = 0,19 [0,15-0,23], SII foreign immigrant = 0,35 [0,30-0,40], p interaction <10-4).

Conclusions:

French women of immigrant origin and immigrant women are underscreened and social inequalities are stronger among them than French women of French origin.

Key messages:

- French women of immigrant origin and immigrant women are less detected for cervical cancer screening than French women.
- French women of immigrant origin and immigrant women are detected for cervical cancer screening with more social inequalities than French women of french origin.

Risk of macrosomia and low birthweight among immigrants in Belgium, a perfect mirror?

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Background:

Both low birthweight (LBW) and macrosomia are associated with increased risk health conditions but risk factors of macrosomia among immigrant are understudied. One hypothesis is that some migrant groups at high risk for LBW have correspondingly low risk for macrosomia, and vice-versa. Our objective was to analyze LBW and macrosomia among immigrants according to naturalization, time since naturalization and socioeconomic status in Belgium.

Methods:

The data came from the linkage between the Brussels birth and death registers, the national register of migrant trajectories and the social security register for the years 2004-2010. We used logistic regression to estimate the odds ratios of the associations between LBW and macrosomia according to maternal nationality and time since naturalization, taking into account socioeconomic status (SES), parity and maternal age.

Results:

Data relate to all singleton births among Belgian, Maghrebi, Sub-Saharan African and Turkish women (n = 76 312). Compared to Belgians, we observed lower risk of LBW but higher risk of macrosomia among Maghrebi women ($p < 0.0001$). Among Turkish and Sub-Saharan African mothers the risk of LBW is higher than the Belgian ($p < 0.001$) but the risk of macrosomia is similar to Belgian mother. The results show a U-shaped increase of LBW and decrease of macrosomia with time since naturalization for all migrant groups. Results did not change after adjustment with maternal characteristics and SES. In parallel, we observe an improvement of SES among all migrant groups.

Conclusions:

Our results show an increase of LBW rates and a decrease of macrosomia among Maghrebi, Sub-Saharan African and Turkish women with time since naturalization. The risk of macrosomia completely mirrors the risk of LBW for Maghrebi mother but not for Sub-Saharan African and Turkish women. Further studies would help to better explain risk factor and social determinants of macrosomia among immigrant.

Key messages:
- We observed an increase of LBW but a decrease of macrosomia with time since naturalization among immigrants.
- Patterns of macrosomia do not completely mirror those of LBW among different migrant groups.

Promoting sexual health literacy among migrants in Sweden

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Background:
Migrants constitute a growing share of the European population. Refugees and migrants in Europe have a higher risk for poor sexual and reproductive health than the native-born population. These differences can be explained by limited access to sexual health care, family planning and prevention.

Newly arrived migrants in Sweden are offered a programme encompassing civic orientation provided in mother tongue by communicators. MILSA web-based education platform aims to secure a national standard for civic orientation. Over a three-year period, 200 communicators across Sweden will receive training. This study will explore civic orientation as an arena for health communication, and the role of the communicators for delivering sexual health information. It will identify active components for the delivery and uptake of sexual health information.

Methods:
Qualitative in-depth interviews were conducted with nine migrant women during their resettlement, and with twenty communicators participating in MILSA education platform.

Preliminary results:
- Receiving information in mother tongue by communicators with cultural competence increases access to information. Shared understandings of shame and stigma associated with sexual health constrain the quality of delivery and uptake.
- Leadership, pedagogic skills, cultural competence, and responsiveness to target group are important qualifications for the communicators.
- Communicators need an understanding of both cultures, how they interact, and the influence of migration on cultural identity to deliver SRHR information.
- Trust among participants, and between the communicator and participants is essential for the delivery and uptake of sexual health information.

Conclusions:
Building competence to deliver sexual health information among professionals who encounter migrants at an early stage in the resettlement has the potential to build sexual health literacy and reduce barriers to accessing sexual and reproductive health.

Key messages:
- Civic orientation is an important arena for reaching migrants with SRHR information.
- To empower the migrants to take control of their sexual and reproductive wellbeing in the new country, this information must be culturally, linguistically appropriate and delivered pedagogically.

Refugee Escape Room©: a new gamification tool to deepen learning about Migration and Health

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Background:
The aim of gamification is to provide an experiential exercise that invokes emotions to deepen learning. MyHealth project is interested in developing tools that facilitate healthcare access to newly arrived immigrants in Europe. One important barrier is the low levels of intercultural competency among healthcare professionals and the pervasiveness of negative health-related stereotypes.

Methods:
We aim to demonstrate the educational value and social impact of the Refugee Escape Room©, to 1) raise awareness about the social and health challenges faced by vulnerable migrants and 2) provide an effective intercultural competence and self-efficacy training for hosting community. The game was created in 2017 by healthcare professionals and university students with personal migratory experience. It is divided in two parts. The first part addresses knowledge gaps about relevant aspects of Migration and Health. The second part is a fictional border control exercise with multiple bureaucratic challenges that participants, organized as ''families'', must overcome to succeed. A pre-post pilot was executed to test for tool effectiveness. The piloting phase involved carrying out multiple instances of the activity for separate target groups. A questionnaire was developed with items related to knowledge, self-efficacy and intercultural competence. The questionnaire was filled by participants at baseline and post intervention to assess for statistically significant changes in all outcomes.

Results:
while the piloting phase is still ongoing preliminary results show a high level of acceptability and engagement with the tool.

Conclusions:
Refugee Escape Room© is a newly created tool that posits as a promising awareness-raising, competency-building gamification tool that is easily adaptable to multiple settings and participants.

Key messages:
- Gamification provides an experiential exercise that invokes emotions to deepen learning.
- Refugee Escape Room© is a promising tool for raising awareness about challenges faced by vulnerable migrants.

4.B. Cross cultural competence and access to health services for migrants

Transnationalism and Caring for Migrant Families with Young Children

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Background:
Migrant families' transnational ties may contribute to their hardships and/or may be a source of resiliency. A care approach that acknowledges these transnational ties may foster a positive identity and give coherence to experiences. We

conducted an integrative review to determine if there is evidence that health and social services supporting migrant families with young children consider transnational ties during care with these families.

Methods:

We searched 15 databases to identify relevant literature including empirical research and discussion papers reporting on a health or social program, service, intervention or care experience of migrant families during early childhood (pregnancy to age five) in a Western country (i.e., Canada, US, Europe or Australia). Information regarding if and how the intervention/service/program/care addressed transnationalism, were extracted and synthesized.

Results:

Over 34,000 records were screened; 296 articles met inclusion criteria. Most literature was from the US. Care, programs and interventions examined included prenatal classes, doula support, maternity care, postpartum home visits, breastfeeding support, nutrition and feeding counseling, and parenting and early childcare programs. There is evidence that care-providers empathize and offer information on family reunification processes for families dealing with separation from loved ones and are open to and accommodate cultural traditions (e.g., feeding and parenting practices) originating from the home country; otherwise there is little evidence that transnational ties are addressed during care.

Conclusions:

Significant knowledge gaps remain regarding whether and how care-providers' take into account transnational ties, including distance care-giving of children or elderly, use of health services abroad, and receipt of advice and support from family back home, which may affect their relationships with families and/or the effectiveness of their interventions.

Key messages:

- Significant knowledge gaps remain regarding whether and how care-providers' take into account transnational ties in early chilldhood care.
- More research is needed on transnationalism and the health and social care of migrant families.

Utilization, satisfaction and barriers of medical care among adults of Turkish descent in Germany

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Background:

The growing proportion of people with a migration background poses major challenges for public health and the health care system in Germany. People of Turkish descent represent the largest group within this specific population. The aim of this study was therefore to examine the use and satisfaction of medical services and barriers to health care access among adults of Turkish descent in Germany.

Methods:

A cohort study of a group of nearly 1200 Turkish adults in Berlin and Essen constitutes the basis of this analysis. The baseline examination was carried out as part of the pretests of the German National Cohort study. This follow-up survey assessed utilization, satisfaction and subjectively perceived barriers in the German health care system, as well as sociodemography, lifestyle, health status and quality of life via self-report (paper based or online) in Turkish or German. Descriptive preliminary results are presented in this abstract.

Results:

The first 287 participants interviewed until December 31, 2018 were on average 49 years old, with 64% being female. 90% of the participants had a family doctor and in the last 12 months, 17% were in a hospital for in-patient treatment and 23% in an emergency room. The use of screening programs varied from 15% (skin cancer screening) to 87% (mammography). The most frequently visited physician was the general practitioner (86%). The participants were satisfied regarding many aspects, with the best values for the communication with their doctor. However, 22% reported problems or barriers in the context of medical care in the last five years.

Conclusions:

These preliminary results provide a first insight into the utilization behaviour among adults of Turkish descent, their satisfaction as well as barriers with the German health care system. However, possible consequences of our study should only be discussed after all analyses have been completed.

Key messages:

- This is one of the few cohort studies in a migrant population in Germany.
- Knowledge of barriers could provide indications of problems of adults of Turkish descent in the German health care system.

The health situation of children and adolescents with migration background in Germany

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Introduction:

Although more than one third of minors living in Germany have a migration background (MB), valid data on the health of this population are still lacking. The German Health Interview and Examination Survey for Children and Adolescents in Germany (KiGGS wave 2, 2014-2017) provides population-based data to make reliable statements on the health of adolescents with and without MB.

Methods:

Survey data from KiGGS wave 2 are used to describe the general health status, mental health and the prevalence of allergic diseases in 3-to 17-year-old children and adolescents (n = 13,568). To determine overweight, body height and weight are measured (n = 3,463). In addition to MB (without/one-sided/two-sided), the socio-economic status (SES) and the length of stay of the parents in Germany are taken into account.

Results:

Children and adolescents with two-sided MB show a physician-diagnosed atopic dermatitis (3.5%vs.6.9%) and attention deficit hyperactivity disorder (ADHD) (1.5%vs.5.1%) less frequently than their peers without MB, but more often a moderate or poor general health status (6.1%vs.3.9%). Adolescents with two-sided MB are also more often affected by overweight than those without MB (22.1%vs.12.2%). If only participants with MB are considered, their health situation is often associated with the SES and partly also with the length of stay of the parents.

Discussion:

Health differences between children and adolescents with and without MB vary by the observed indicator. The heterogeneity of children and adolescents with MB, which can be partly determined by the SES or the length of stay of the parents, should be considered in target-group-specific interventions.

Main messages:

The vast majority of children and adolescents in Germany grow up healthy and a MB is not per se associated with a poorer health status. Our results suggest that considering MB as the sole determinant of health to reflect the impact of migration on health is insufficient.

Key messages:

- Migration background is not per se associated with a poorer health status.
- Socioeconomic status and parents' length of stay are derminants associated with poorer health outcomes among children and adolescents with migration background.

Health of adolescents with migration background in Germany: cross-sectional results from KiGGS wave 2

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Background:

Although 36.5% of minors in Germany had a migration background (MB) in 2017, data on their health situation is scarce. The project 'Improving Health Monitoring in Migrant Populations' (IMIRA) initiated in 2016 aims to expand health reporting on the health situation of people with MB, for which a core indicator set was developed. We are describing the health situation of adolescents based on selected core indicators.

Methods:

Data from the German Health Interview and Examination Survey for Children and Adolescents (KiGGS wave 2) (2014-2017) are used; adolescents from 11 to 17 years are considered. Prevalences and 95% confidence intervals are calculated for the following indicators: General health status, overweight, hazardous alcohol consumption and use of pediatric or general practitioner's services. These indicators are stratified along socio-demographic (gender, age, socio-economic status (SES)) and migration-related characteristics (MB, parents' duration of stay, language spoken at home).

Results:

There are hardly any migration-related differences in the general health status and the use of general medical services. While adolescents with MB are more often affected by overweight (without MB: 11.2%, one-sided: 18.9%, both-sided: 19.8%), they show less often risky alcohol consumption (without MB: 14.5%, one-sided: 7.8%, both-sided: 4.4%). There are differences in health behavior according to SES, parents' duration of stay in Germany and language spoken at home.

Conclusions:

Overall, the health of adolescents is good, regardless of their MB, and general medical services are used equally. Differences in health behavior cannot be reduced solely to the (non-)existence of a MB, but need a deeper consideration of more specific migration-related characteristics and the SES.

Key messages:

- The general health status and health care utilization do not differ between adolescents with and without MB.
- In contrast, the results on indicators of health behavior vary.

Transnational medication management by elderly migrants – a mixed-methods approach

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Background:

Many elderly people of Turkish origin choose a transnational lifestyle and commute between Germany and Turkey every few months. These circular migrants often suffer from chronic diseases. The transnational lifestyle can lead to discontinuities in long-term medication and irregular check-ups. If continuity of care is not ensured transnationally, health risks arise.

Methods:

In a mixed-methods study 8 expert-interviews with general practitioners and 25 guideline interviews were conducted with circular migrants to analyze their medication adherence. Additional quantitative analyses were conducted based on data from a German statutory health insurance popular with migrants to investigate discontinuities of prescribed medication.

Results:

Cross-border care involves different health risks with regard to medication adherence. For example, patients in Germany rarely receive the amount of medication they need for their stay in Turkey and there are discontinuities in medication delivery. The multi-perspective insight into the patients' experiences of medical care and the view of general practitioners shows strong variations of preferred strategies to handle the challenges of transnational medication management. Single strategies, such as leaving the health insurance card in one state for prescription and sending of medication through family members or asking for higher amounts of medication to store before travel, lead to frustration both at GPs' and patients' sides. GPs experience high pressure by the health system's structure in providing good care for the patients, especially in providing enough time for information transfer between GPs and patients.

Conclusions:

Transnational solutions for health care, and in particular medication care, such as an interprofessional collaborative care across borders or transnational e-health records need to be developed.

Key messages:

- A transnational lifestyle can lead to discontinuities in the provision of medication.
- Transnational, inter-professional cooperation is needed to ensure continuity of health care for circular migrants.

Development of a dictionary for transcultural care in Europe: a deliverable of the TNP project

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Background:

Transcultural care remains a hot domain in current nursing practice, especially due to the challenges relating to increased population mobility due to both medical tourism and financial / political instability. The TNP (transcultural nursing for practice) Erasmus plus project was implemented between 2017-2019 to attempt to detect best practices regarding intercultural care in Europe as well as to develop suitable training materials to improve the communication among people of diverse ethnic, cultural and religious background.

Methods:

A study was conducted in January 2019 in all six countries participating in the TNP project. 6 healthcare professionals per country we invited to identify key terms relevant to 15 distinct domains of healthcare and health-related cultural and educational topics. After initial open term brainstorming, the terms were graded by all participants according to their perceived relevance to the project aim using a 3 round Delphi approach.

Results:

A total of 36 expert responders from all six countries agreed to participate of which 70% women. Age varied significantly between 35-75 years. After the final Delphi round, consensus was achieved, with a total of about 1100 words included in the final joined statement. The highest degrees of consensus was achieved for terms relating to parts of the body, common symptoms and conditions and healthcare-associated structures and professionals. On the other hand, a significantly lower degree of consent was determined regarding terms relevant to regional health topics, spiritual care, emotional / mental health and role of family and environment.

Conclusions:
Transcultural care is a necessary component of everyday practice in modern healthcare provision institutions. Despite significant language and cultural barriers, the main priority domains are almost universally uniform, thus justifying the development of suitable health promotion / education materials to minimize the relevant gap.

Key messages:
- Transcultural care is a current challenge in health promotion.
- Despite cultural differences, major terms of healthcare provision remain largely uniform across Europe.

A mixed-method evaluation study of a comprehensive cross-cultural training program in Stockholm

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Background:
Global migration and increasingly diverse populations poses new challenges to mental health services. Cultural differences between refugees and mental health professionals and lack of cultural competency is described as challenging. Cross-cultural training has been proposed as one way to reduce these problems. There are few evaluations on cross-cultural mental health training outcomes. Between 2016-2018, 13 one-day cross-cultural training interventions was implemented in Stockholm to equip mental health professionals to respond to mental health needs in a time of high influx of refugees.

Objectives:
To evaluate a comprehensive cross-cultural training program regarding participant's knowledge development, their experiences and views of the training - and their perceptions about their capacity to deliver mental care to refugee patients. An embedded mixed-method design was applied. We used before and after training questionnaires (n = 248) and conducted six focus group discussions (FGD) with mental health professionals. Quantitative data were analyzed by paired t-test and factor analysis, qualitative data were analyzed by thematic content analysis.

Preliminary results:
Before the training, significant differences of mean knowledge was found (p = 0.004) among participants. Principle axis Factoring resulted in 3 factors before and 4 factors after the training, explaining 78% of the covariance. Findings from the after training FGDs, revealed that refugee patients were described as different and challenging, and little was known about the reality they live in. The training contributed to a better understanding of migration, integration and refugee health- as well as the role of culture. Further, it promoted empathy and professional self-reflections.

Conclusions:
Cross-cultural training can contribute to knowledge development, attitude changes and also be valuable for care provider's professional role.

Key messages:
- Training mental health professional in cross-cultural issues may facilitate improved quality of care to refugee groups.
- The training can also strengthen participants in their professional role.

4.C. Round table: AI and Big Data: Ethical Challenges and Health Opportunities

Organised by: Digital Public Health Conference
Chair persons: Patty Kostkova - UK
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The recent emergence of Big Data in healthcare (including large linked data from electronic patient records (EPR) as well as streams of real-time geolocated health data collected by personal wearable devices, etc.) and the open data movement enabling sharing datasets are creating new challenges around ownership of personal data whilst at the same time opening new research opportunities and drives for commercial exploitation. A balance must be struck between an individual's desire for privacy and their desire for good evidence to drive healthcare, which may sometimes be in conflict. With the increasing use of mobile and wearable devices, new opportunities have been created for personalized health (tailored care to the needs of an individual), crowdsourcing, participatory surveillance, and movement of individuals pledging to become "data donors" and the "quantified self" initiative (where citizens share data through mobile device-connected technologies). These initiatives created large volumes of data with considerable potential for research through open data initiatives. In this workshop we will hear from a panel of international speakers working across the digital health, Big Data ethics, computer science, public health divide on how they have addressed the challenges presented by increased use of Big Data and AI systems in healthcare with insights drawn from their own experience to illustrate the new opportunities that development of these movements has opened up.

Key messages:
- The potential of open access to healthcare data, sharing Big Data sets and rapid development of AI technology, is enormous - so as are the challenges and barriers to achieve this goal.
- Policymakers, scientific and business communities should work together to find novel approaches for underlying challenges of a political and legal nature associated with use of big data for health.

Ethical challenges associated with health-related big data research

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Big data trends in biomedical and public health research hold promise for improving prevention, enabling earlier diagnosis, optimizing resource allocation, and delivering more tailored treatments to patients with specific disease trajectories. At the same time, due to their methodological novelty, algorithmic complexity and reliance on data mining for knowledge generation, big data approaches raise ethical challenges. This talk presents an overview of the major ethical challenges associated with health-related big data research. These include demarcating the boundary between personal health data and non-health data, re-defining the notion of private information, sustaining trust in health data sharing, preventing data-driven discrimination and ensuring a fair distribution of benefits and burdens among all stakeholders. Case studies from dementia research and public mental health will be discussed to illustrate these challenges and provide an ethical assessment. Furthermore, this talk will provide an overview of the normative proposals that have been recently advanced to align health-related big data research with established regulatory frameworks such as data protection regulation, regulation on human subject research and ethics review. Based on this analysis, suggestions will be made on how to maximise the benefits of big data for public health while minimizing ethical risks.

Cloud-computing and precision medicine: Big data offers big opportunities

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Research on large shared medical datasets and data-driven research are gaining fast momentum and provide major opportunities for improving health systems as well as individual care. Such Open Data can shed light on the causes of disease and effects of treatment including adverse reactions side-effects of treatments, while also facilitating analyses tailored to an individual's characteristics, known as personalized or precision medicine. Precision medicine treatments will take personalization to the next level and be effective for individual patients based on their genomic, environmental, and lifestyle factors. High-throughput sequencing technologies and open databases have made precision medicine possible but up to now only large research centres could handle the large scale technology needed for its processing. Aside from issues such as user trust, data privacy, transparency over the control of data ownership, and the implications of data analytics for personal privacy with potentially intrusive inferences, recent advances by Berkeley using open source Big Data technologies and Cloud Computing Services has allowed precision medicine studies to be conducted by small and agile research labs and researchers around the world.

The importance of ensuring artificial intelligence and machine learning can be understood at the human level

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With rapid developments in big data technology and the prevalence of large-scale datasets from diverse sources, the healthcare predictive analytics (HPA) field is witnessing a dramatic surge in interest. In healthcare, it is not only important to provide accurate predictions, but also critical to provide reliable explanations to the underlying black-box models making the predictions. Such explanations can play a crucial role in not only supporting clinical decision-making but also facilitating user engagement and patient safety. If users and decision makers do not have faith in the HPA model, it is highly likely that they will reject its use. Furthermore, it is extremely risky to blindly accept and apply the results derived from black-box models, which might lead to undesirable consequences or life-threatening outcomes in domains with high stakes such as healthcare. As machine learning and artificial intelligence systems are becoming more capable and ubiquitous, explainable artificial intelligence and machine learning interpretability are garnering significant attention among practitioners and researchers. The introduction of policies such as the General Data Protection Regulation (GDPR), has amplified the need for ensuring human interpretability of prediction models. In this talk I will discuss methods and applications for developing local as well as global explanations from machine learning and the value they can provide for healthcare prediction.

4.D. Workshop: MigHealthCare - strengthening Community Based Care to minimize health inequalities

Organised by: Mig-HealthCare consortium
Chair persons: Pania Karnaki - Greece, Allan Krasnik - EUPHA (MIG)
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Over the past few years, a large number of refugees, migrants and asylum seekers have reached the south-eastern points of entry of the EU, challenging health and social systems of bordering countries with a spillover effect to the rest of the EU. Refugees, asylum seekers and migrants are at higher risk of poverty and social exclusion compared to the local populations, while the different vulnerable groups face diverse barriers when accessing health services. In many cases they do not receive appropriate health and social care that best meets their needs. Furthermore, in the EU MS, different practices apply to health and social care delivery for migrants/refugees. Research has shown the importance of community-based models to improve health care access of vulnerable migrants and refugees. Such models include elements of good communication, cultural awareness, sensitivity and respect for the diverse cultural and ethnic backgrounds by community health care staff as well health education and primary healthcare services.

Mig-HealthCare - strengthening Community Based Care to minimize health inequalities and improve the integration of vulnerable migrants and refugees into local communities, is a 3-year project, launched in 2017, with the financial support of the European Commission. It is implemented by a consortium of 14 partners among them universities, national authorities and NGOs from ten countries across Europe (Greece, France, Malta, Germany, Austria, Italy, Cyprus, Spain, Sweden and Bulgaria). The overall objective of Mig-HealthCare is to improve health care access for vulnerable migrants and refugees, support their inclusion and participation in European communities and reduce health inequalities. The project's specific objectives are:

- Describe the current physical and mental health profile of vulnerable migrants and refugees including needs, expectations and capacities of service providers.
- Develop a roadmap and toolbox for the implementation of community based care models, following an assessment of existing health services and best practices.
- Train community service providers on appropriate delivery of health care models for vulnerable migrants and refugees.
- Pilot test and evaluate community based care models which emphasize prevention, physical and mental health promotion and integration.

The project results are presented on behalf of the Mig-HealthCare consortium.

Key messages:

- The overall objective of Mig-HealthCare is to improve health care access for vulnerable migrants and refugees.
- The Mig-HealthCare project focuses on developing a roadmap to facilitate the effective implementation of community care models.

Survey on the physical and mental health among migrants and refugees in ten European countries

Pania Karnaki

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This study discusses the main findings of the quantitative research conducted within the Mig-HealthCare consortium countries to explore the physical and mental health of migrants and refugees. The study population is defined as migrants/refugees who have been residing in Europe, for at least 6 months and up to 5 years. In order to be able to capture the recent migration flow, the analysis was based on 1169 questionnaires collected in 10 EU-Member States, answered by adult migrants residing less than 5 years in the specific country.

A total of 29% of migrants stated that their health is poor or fair. Overall, 56.9% of migrants needed health care services during the last 6 months, however approximately one in four did not have access to them. The most frequent problems were long waiting times, not being able to organize an appointment, not knowing where to go, lack of communication and long distances. The most frequent chronic health problem migrants/refugees face is caries and headaches/migraines, followed by psychological disease and sleep disorders. Approximately one in three women have been pregnant since entering the current EU country, whereas one in four have had a miscarriage or abortion and 21.5% are currently pregnant.

Summing up, most of the migrants face common medical problems such as bad teeth, headaches and psychological problems. However long waiting times, not knowing where to go and lack of communication are barriers to accessing healthcare. The fact that the immunization status of migrants/refugees is unclear, a significant number suffer from serious chronic diseases and the limited breast and cervical cancer screening of female migrants/refugees pose serious threats to their health and important challenges for the health services of Europe.

Analysis of needs, expectations and capacities of health and social care professionals in order to provide culturally adapted care

Adele Lebano

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The Mig-HealthCare consortium conducted a qualitative study of the health care needs of vulnerable migrants/refugees in Europe. The research was conducted between Fall 2017 and Spring 2018. In total, 20 focus group discussions or, where necessary individual interviews (19), were organised with health care professionals and service providers; policymakers; and representatives from Non-Governmental Organisations - NGOs. Thematic qualitative analysis was employed. The main results of the analysis show that:

Health care provision for migrants is uneven throughout the EU and variations exist even within the same country. Health care providers and NGOs agree that health care for migrants is inadequate and biased in favour of particular conditions and cases (minors, pregnant women and acute conditions). Challenges faced by different countries vary; while in some countries the main issue is legal access, in other basic needs such as sanitation and basic infrastructure were emphasised. Austerity measures following the 2008 financial crisis have negatively affected the health care system in general, which in turn has negatively affected the provision of health care for migrants/refugees. Discrimination linked to socio-economic and ethnic conditions is reported as a barrier to equal health care access. Knowledge, language and communication on both the demand and the supply side of health care provision emerge as crucial to ensure equal access for migrants/refugees. Gender may act as a barrier with women tending to be more marginalised in the host country, in terms of language proficiency and health literacy, lowering health care access. One of the main challenges for providing equal health care access for migrants has to do with the ability to balance a universal right to health with the particular means of achieving it. The evidence collected here shows how this tension between end and means is at work in different moments of the provision of health care for migrants/refugees.

Best practices addressing healthcare care access of migrants and refugees in European countries

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Mig-healthCare has identified sources in the countries and languages of the consortium providing guidance for community-based healthcare for migrants and refugees. A total of 54 sources that refer to best practices in seven European countries were identified. Results were categorized along with the themes: organization, communication, training, education and facilities & services. Successful organizational measures were a close collaboration with different governmental authorities, NGOs, community organizations and various local service providers. Moreover, engagement with members from both the host community and the migrant/refugee community in the design and implementation phases is essential. The need to track all activities through data collection and periodic evaluations is important in order to evaluate the effectiveness of systems. Funding was mentioned as important to secure continuity of projects and systems. Bridging communication barriers is a major facilitator to reduce health disparities. Differences in the types of practices and challenges per country were noted. Translators and cultural mediators are a key element in successful implementation, but across EU there is a need for more specialized staff to face the cultural barriers of the large variation in refugee/migrant backgrounds. The empowerment of migrants/refugees in promoting well-being through the engagement of the host community to help reduce stigma and discrimination is a successful strategy facilitating the access to care due to the increase of their health literacy skills. Finally, tailored services to give an answer to the specific needs of migrants and refugees are important, for example at first reception centres, standard medical screening and psychosocial risk assessment was recommended. Through this analysis, we can distinguish community-based care models elements facilitating the access of migrants and refugees to healthcare.

Modelling healthcare access for migrants and refugees in Europe: identifying the major health issues

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The Mig-HealthCare systematically searched to identify the key health areas of refugee/migrant health in order to facilitate interventions that help access to care services for migrants and refugees. The literature review was carried out in March 2018 using 3 large scientific databases using a combination of search terms following the PRISMA methodology and a standard set of items used to report on systematic reviews. Based on the predefined inclusion and exclusion criteria, a total of 118 publications were used for data extraction. It is important to note, that in almost all of the sources identified, the following cross-cutting factors were described as influencing access to healthcare:

- Continuity of Information, how it relates to policy, how it differs between health services and across-borders. Furthermore, the organizational coordination among social and health care providers in the host country determinates the successful access to healthcare of migrants/refugees.
- Language & Communication takes into consideration both the healthcare service and its provision of translators and cultural mediators, and the host country language proficiency of the migrant/refugee.
- Organizational improvement of access and delivery of health care services for migrants and refugees in addition to Cultural Competence of the healthcare providers meaning the ability to maximize their sensitivity in the service of care to culturally diverse groups.
- Health literacy understood as the motivation and competences of the migrant population to access, understand, appraise, and apply health information.

Additionally, the health issues of particular importance for migrants/refugees as emerged from the systematic review, including mental health, maternal/child health, health promotion, NCDs and chronic diseases, Oral/lDental health, and Vaccinations should be included in planning future needs and healthcare access.

Predictions concerning the use of health care services in Europe by migrants/refugees and the Mig-HealthCare Roadmap & Toolbox

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Based on the multiple levels of research conducted within the project the consortium developed a roadmap & toolbox which includes the following categories: Continuity of information, Language Culture & Communication, Mental Health, Vaccinations, Maternal/child health, Health promotion, Oral health/Dental Care and NCDs while the Toolbox contains tools on these categories in different languages. The roadmap & toolbox is accessible through the project website. In addition, different scenarios, giving a comprehensive picture of the foreseen situation and the evidence-based policies and actions needed to maximize the effective delivery and sensitivity in the service of care to culturally diverse population groups were developed focusing on mental health, chronic disease management and oral health. Refugees and migrants tend to have a higher prevalence of mental distress compared to non-refugees. For the challenge of lack of recording mental health of migrants/refugees, improving the collaboration between 'migrant-specific' organizations is needed. Health care systems in Europe will have to accommodate the high demand for health care services for chronic conditions among migrants/refugees in the coming years. Implications such as the impact of poverty, level of health literacy and/or the cultural adaption of the measures need to be considered when planning to address future trends related to non-communicable diseases including diabetes among migrants/refugees. The provision of oral care presents great variability across the European countries, but in most cases, it is characterized by high cost and restricted range of services if offered within the state health systems. Migrants /refugees will not be able to meet the high cost of private dental care. Local community interventions have been proven very effective.

4.E. Public health: politics and policies

The European Semester 2015-2018: themes and progress of country specific recommendations on health

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Background:

The European Semester (ES) is a policy coordination and scrutiny framework at EU-level for surveillance of fiscal and macro-economic policies in Member States. Health systems have not evaded that scrutiny. The analysis focusses on how health systems reforms are being endorsed in Country Specific Recommendations (CSRs) and how the ES process links to planning and implementation of national health system reforms over the period 2015-2018.

Methods:

A descriptive content analysis of CSRs with a search for the keywords and phrases 'health', OR 'healthcare', OR 'long-term care' was performed for the years 2015-2018. Furthermore, CSRs addressing health systems were classified according to whether they were targeting access, quality or sustainability; and categorized regarding organisation and governance, financing, physical and human resources, and provision of services. Finally, implementation progress on the health CSRs was rated according to EC's own evaluation scheme derived from the preceding year's country report.

Results:

CSRs with health system recommendations have featured continuously in the ES process each year and have stabilised in number. The themes of health CSRs are still dominated by financial sustainability, cost-effectiveness and of financing, although other health system goals and domains, particularly access, are increasingly addressed. There is a high degree of consistency on the content of health CSRs over the years for each country addressed. Progress with implementation of health CSRs is disappointing so far, based on the EC evaluations. No clear link between discontinuation of health CSRs and evidence of progress in implementing the CSR can be discerned.

Conclusions:

The results uncovered some of the links between national and European institutions leveraging the ES to push health system reforms. However, a more balanced and long-term view is needed for the ES to contribute solidly to complementing national efforts in a complex reform context.

Key messages:

- Health CSRs are still dominated by financial sustainability considerations while other health system goals and domains are increasingly addressed.
- Progress with implementation of health CSRs is disappointing so far, although a longer-term perspective is needed to pay tribute to the complex reform environment of health system reforms.

Deindustrialisation, Foreign Investment and Social Development: Mortality in the Hungarian Rustbelt

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Background:

Many nations are experiencing deindustrialisation. A common strategy to cope with this is encouraging foreign investment. We still know little about the health impact of such industrial transformations, especially their role in the postsocialist mortality crisis.

Methods:

Utilising a novel dataset constructed over two years covering 52 towns, 550 companies and 42,800 subjects, using multilevel survival modelling I test how deindustrialisation and foreign investment affect mortality in medium-sized towns in Hungary. I group towns into severely, and moderately deindustrialised (1989-1995), and into state ownership, domestic private and foreign ownership dominated categories (1995-2004). A retrospective cohort study in these towns collected data on vital status of respondents. I use multiple robustness checks and sensitivity analyses to reduce selection bias and endogeneity.

Findings:

Deindustrialisation is associated with significantly higher odds of mortality for men between 1989 and 1995 (OR = 1. 16; $p < 0.01$). Foreign investment was not associated with mortality in any of the models for the 1989-1995 period. Between 1995 and 2004, women living in towns dominated by state ownership had a significantly lower risk of mortality compared to those living in towns dominated by foreign investment (OR = 0.79; $p < 0.05$) or domestic private ownership (OR = 0.74; $p < 0.01$). Foreign investment was associated with higher income growth in both periods; however, this was not associated with better health results.

Conclusions:

Severe deindustrialisation was a crucial factor behind the post-socialist mortality crisis for men. The indirect economic benefits of foreign investment do not translate automatically into better health; in fact, women living in towns dominated by foreign investors appear to have a higher risk of dying. Foreign investment might promote economic growth but in itself cannot mitigate the health impact of severe deindustrialisation.

Key messages:

- Deindustrialisation is a significant contextual health risk factor.
- Spontaneous market processes, such as foreign investment, do not automatically reduce the detrimental health effect of plant closures.

Deaths of despair and Brexit votes: cross-local authority statistical analysis in England and Wales

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Objectives:

To test the hypothesis that 'deaths of despair', a marker of social suffering, was associated with greater support for Brexit in the UK's 2016 EU referendum.

Methods:

Cross local authority regression models of 2016 Brexit referendum vote shares for each local authority in England and Wales on changes in rates of suicide and drug-related deaths pre- (2005-2007) and post-recession (2014-2016), adjusting for several socioeconomic and demographic factors. Survey population: 345 local authorities in England and Wales.

Results:

Greater mortality rates from deaths of despair were significantly associated with higher Brexit vote shares. In unadjusted models, an increase of 10 drug-related deaths per 100 000 associated with a 13.20 percentage point increase in Brexit votes (95% CI: 7.09 to 19.31), while an increase of 10 suicides per 100 000 was associated with a 9.93 percentage point increase in vote shares for Brexit (95% confidence interval 6.21 to 13.65). These associations are explained by local area-level economic and education factors.

Conclusions:

Worsening external causes of death correlate with Brexit voting. Such deaths may serve as an early warning indicator for political instability.

Key messages:

- Prior research has shown correlations between deaths of despair and votes shares for Trump in the 2016 US presidential election.
- We extend this research to the UK, showing that greater mortality rates from deaths of despair were significantly associated with higher Brexit vote shares.

Right-wing populism and self-rated health in Europe: a multilevel analysis

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Background:

Individuals who hew to a conservative political ideology have been previously reported to have better self-rated health compared to liberals. No studies have examined whether the correlation between right-wing ideology and health also holds for populism, a brand of politics that is gaining momentum throughout the world. We tested whether the association still holds for right-wing populists.

Methods:

We analysed data from 24617 respondents nested within 18 European countries included in the 2016 European Social Survey. Multilevel analyses were conducted to assess the relationship between political ideology and self-rated health, adjusting for other individual covariates (happiness and social capital) and country-level characteristics (democracy type).

Results:

Individuals who voted for right-wing populist parties were 43% more likely to report fair/poor health compared to traditional conservatives (OR = 1.43, 95% confidence interval 1.23 to 1.67). The association was attenuated after controlling for individual-level variables, including happiness and access to social capital (OR = 1.21, confidence interval 1.03 to 1.42). Higher levels of social capital (informal networks, OR = 0.40, 95% confidence interval 0.29 to 0.56; trust, OR = 0.82, 95% confidence interval 0.74 to 0.92) and happiness (OR = 0.18, 95% confidence interval 0.15 to 0.22) were protectively correlated with fair/poor self-rated health.

Conclusions:

Individuals voting for right-wing populist parties report worse health compared to conservatives. It remains unclear whether ideology is just a marker for health-related practices, or whether the values and beliefs associated with a particular brand of ideology leads to worse health.

Key messages:

- There is a significant association between voting for right-wing populist parties and self-rated poor health.
- Social capital was protectively correlated with self-rated health calling for renewed attention on the effects of social capital on political ideology and health.

The equity impact of a universal child health promotion programme

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Background:

We aimed to evaluate whether the Salut Programme, a universal child health promotion intervention, aimed to strengthen healthy lifestyles in northern Sweden, had any effect on income-related inequalities in positive birth outcomes for children and on healthcare use for children and their mothers.

Methods:

Mother's residence and child's date of birth determined whether the child and the mother belonged to the control group (areas that received care-as-usual) or the intervention group (areas with the intervention implemented from 2005), during the pre-measure period (children born 2002-2004) and the post-measure period (children born 2006-2008). The sum of parents' taxable income was used for socioeconomic ranking. We computed the standard concentration index for six binary indicators of positive birth outcomes, and for inpatient and day patient care for children and mothers during the two years after delivery. Using a difference-in-difference approach, we assessed whether the extent of inequality changed over time between areas.

Results:

Income-related inequalities in child health status at birth and in child healthcare use were absent, except that full-term pregnancies were concentrated among the poor at pre-measure in the intervention group. However, mothers' healthcare use was significantly pro-poor in the control group. The extent of inequality changed between pre- and post-measure periods for two outcomes: the pro-poor concentration of full-term pregnancies in the intervention group at pre-measure disappeared at post-measure; and an increase in pro-poor concentration of normal birth weight in the control group was not matched by a similar increase in the intervention group. Inequalities in healthcare use did not change significantly.

Conclusions:

Birth outcomes and child healthcare use seemed to be equitably distributed. However, the results raise concerns whether the intervention may have reduced the pro-poor concentration of positive birth outcomes.

Key messages:

- There are concerns that participation in universal health promotion programmes differs by socioeconomic status, although few public health interventions have been evaluated from an equity perspective.
- Birth outcomes and child healthcare use in Northern Sweden seemed to be equitably distributed across different socioeconomic groups.

Prevalence of non-adequate health literacy in Europe: a systematic review and meta-analysis

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Background:

Many studies show that a low level of health literacy (HL) is associated with several adverse outcomes. The aim of this systematic review was to estimate the prevalence of non-adequate HL (NAHL) in European countries and outline the main needs for interventions.

Methods:

The systematic search was performed in April 2019 and updated in June 2019. PubMed, Embase and Scopus were searched. Articles were considered eligible if they were cross-sectional studies published in English after 2000 and estimating the NAHL prevalence in European countries. Globally, 15490 articles were retrieved. Adapted Newcastle-Ottawa Scale was applied for the quality assessment. Several stratified meta-analyses were carried out. We also performed a meta-regression analysis to test the association between variables and NAHL.

Results:

In total, 59 articles of heterogeneous quality were included, providing data for 98 studies to include in the proportion meta-analysis. Overall, quantitative analysis yielded a pooled NAHL prevalence of 40% (95%CI, 36%-43%). Despite the prevalence varied considerably by country, it seemed to follow a geographic gradient, with the northern countries clearly having a lower prevalence than the other European counterparts. The pooled prevalence estimates (PEs) varied significantly according to the different type of HL assessment method applied. Also, high study quality was found to be significantly associated with a reduction of NAHL in the PEs. Grouping the sample in general population, oncology patients, chronic disease patients and refugees, the meta-regression analysis showed a significantly lower prevalence of NAHL in oncology patients.

Conclusions:

Although the PEs varied in relation to several factors (e.g. either among population groups, or depending on the HL assessment method), this study shows that more than one in every three surveyed participants had NAHL. Targeted strategies and coordinated policies aiming at improving HL in the Region are needed.

Key messages:

- Despite several variations, a significant proportion of European population has non-adequate health literacy.
- Targeted public health strategies of intervention are crucial to address this deficit.

4.F. Healthy start to life

Maternal immigrant status and signs of neurodevelopmental problems in early childhood

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Background:

A growing body of evidence suggests that children of immigrants may have increased risks of neurodevelopmental disorders. However, evidence based on parent report and on very young children is lacking. We therefore investigated the association between maternal immigrant status and early signs of neurodevelopmental problems in a population-based sample of two-year-old children using standardized parent-report instruments.

Methods:

We used data from the French representative ELFE birth cohort, initiated in 2011. The study sample included 9,900 children of non-immigrant French, 1,403 children of 2nd, and 1,171 children of 1st generation immigrant women followed-up to age two years. Neurodevelopment was assessed using the Modified Checklist for Autism in Toddlers (M-CHAT) and an adaptation of the MacArthur-Bates Communicative Development Inventories (MB-CDI).

Results:

In fully adjusted linear regression models, maternal immigrant status was positively associated with M-CHAT scores, with stronger associations in children of 1st (β-coefficient: 0.19; 95% CI 0.08-0.29) than 2nd generation immigrants (0.09; 0.01-0.17). This association was especially strong among children of 1st generation immigrant mothers native of North Africa (vs. non-immigrant French: 0.33; 0.16-0.49) or French-speaking Sub-Saharan Africa (0.26; 0.07-0.45). MB-CDI scores were lowest among children of 1st generation immigrant mothers, particularly from mostly non-francophone regions. Children of 1st generation immigrant mothers were most likely to have simultaneously low MB-CDI and high M-CHAT scores.

Conclusions:

Our findings suggest that maternal immigrant status is associated with higher risks of early signs of neurodevelopmental difficulties, with strong variations according to maternal region of origin. Standardized screening instruments may aid the early detection and treatment of these difficulties, helping to address inequalities in neurodevelopmental health in children of immigrants.

Key messages:

- Children of immigrant mothers in a population-based sample appear to have elevated neurodevelopmental risks, as assessed by maternal report. This is in line with evidence from clinical samples.
- We found strong variations according to maternal region of origin, with the highest risks in children of 1st generation immigrant mothers from North Africa and French-speaking Sub-Saharan Africa.

Association between legal status, prenatal care utilization, severe perinatal and maternal morbidity

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Background:

Some groups of migrant women have a higher risk of inadequate prenatal care utilization (PCU), severe maternal morbidity (SMM) and severe perinatal morbidity (SPM). To better understand this association, our aim was to assess the association between the legal status and PCU, SMM and SPM during pregnancy.

Methods:

The analysis was performed in the database of the multicenter prospective PreCARE cohort. All pregnant women registered for delivery in 4 university hospital maternity units in Paris north area from October 2010 to May 2012 were included (N = 10 419). Women whose pregnancies ended before 22 weeks of gestation or who delivered in another maternity unit were excluded (N = 820). Women were distributed according to legal status in 4 groups: non-migrants, migrants with French or European nationality, legal migrants and undocumented migrants. The associations between the legal status and the composite variables of prenatal care utilization, SMM and SPM were tested through multivariate logistic regressions also adjusted for maternal characteristics.

Results:

The illegal status was associated with increased risk of inadequate prenatal care utilization [adjusted odds ratio (aOR) 2,52 (2,10 - 3,01)]. Overall, the prevalence of SMM was 3,2 % and SPM 7,0 %. The illegal status was associated with higher risk of SMM [aOR 1,84 (1,21 - 2,79)], especially severe hypertensive disorder of pregnancy [aOR 2,29 (1,19 - 4,40)]. However, no significant association with SPM was found [aOR 1,29 (0,95 - 1,74)]. The sensitivity analysis demonstrates that results do not change after exclusion of women who arrived less than 12 months before delivery and those who started their follow-up after 14 weeks of gestation.

Conclusions:

The illegal status was associated with an inadequate prenatal care utilization and a higher risk of SMM, especially severe hypertensive disorder of pregnancy.

Key messages:

- The illegal status was associated with increased risk of inadequate prenatal care utilization.
- The illegal status was associated with higher risk of severe maternal morbidity during pregnancy.

Could increasing income in lone-parent households reduce inequality in child mental health problems?

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Half of lone-parent families in the UK live in relative poverty (income <60% national median) compared to a quarter of two-parent families. Family hardship is associated with increased risk of child mental health problems (CMHP). Using data from the UK Millennium Cohort Study (~18,000 children born 2000-02), we investigated whether equalising income between lone- and two-parent households could reduce prevalence and inequality in CMHP. Exposure was family structure (lone-/ two-parent household) at 9 months; mediator was equivalised weekly household income at 3 years(y); outcome was parent-report CMHP at 5y (Strengths and Difficulties Questionnaire; normal/ borderline-abnormal). The analytic sample comprised 11,193 children.

We modelled the relationship between family structure, income and CMHP in logistic marginal structural models, weighted for attrition to MCS at 5y, and adjusted for baseline and intermediate confounding. Prevalence of CMHP was assessed overall and according to family structure. Differences between lone and two-parent households were represented by risk ratios (RRs) and differences (RDs) [95% CIs]. We modelled a hypothetical increase in income for all lone-parent households, so that median income was equalised between lone- and two-parent households, and re-estimated prevalence, RRs and RDs.

Prevalence of CMHP was 8.5%. Children from lone-parent households were more likely to exhibit CMHP (RR 1.73[1.28-2.19]; RD 5.70[2.44-8.97]). Equalising income reduced prevalence (8.2%), and differences in CMHP by family structure (RR, 1.37[0.90-1.83]; RD, 2.86[-0.06-6.31]). Sensitivity analyses showed that associations between exposure, mediator and outcome were comparable in more recent MCS sweeps, indicating that these relationships still hold today. Inequalities in CMHP between lone- and two-parent families in the UK are large. Levelling up income for lone-parents households could reduce differences in child mental health problems related to family structure.

Key messages:

- Inequalities in CMHP between lone- and two-parent families in the UK are large.
- Levelling up income for lone-parents households could reduce differences in child mental health problems related to family structure.

A comparison of the effects of maternal anxiety and depression on child development

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Background:

Most studies on the association between the mental health of mothers and the development of their offspring have focused on maternal depression, but only a few have investigated the association between maternal anxiety and child development. We aimed to compare the associations between maternal depression and anxiety symptoms 6-8 weeks postpartum and infant development at 1 year.

Methods:

We conducted a longitudinal study of 396 mother-child dyads. The mothers were recruited after birth in 3 different hospitals in Israel in 2017 and were followed for one year. Mothers were assessed by completing the General Anxiety Disorder-7 (GAD-7) questionnaire and the Edinburgh Postnatal Depression Scale (EPDS) 6-8 weeks postpartum. Child development was assessed by the Ages & Stages Questionnaires (ASQ-3) at 12 months. Multivariate linear regressions were used to explore the relationship between the EPDS and GAD-7 scores and child development, all as continuous variables, adjusting for maternal education, parity, and gender.

Results:

Depressive symptoms postpartum were only associated with poor personal-social skills (β=-0.5, 95% CI: -0.91, -0.08). Increasing maternal anxiety was associated with poorer development in communication skills (β =-0.48, 95% CI: -0.93, -0.04), personal-social skills (β =-1.02, 95% CI: -1.58, -0.46), solving problems skills (β =-0.7, 95% CI: -1.27, -0.14) and fine motor skills (β =-0.46, 95% CI: -0.9, -0.02). Neither anxiety nor depressive symptoms were associated with gross motor skills. Controlling for quality of attachment, the associations of depression and anxiety with development were no longer significant, suggesting mediation.

Conclusions:

Postpartum anxiety was a stronger predictor of low developmental scores than depression, and associations were probably mediated by impaired attachment. Identifying and supporting mothers experiencing anxiety after birth may mitigate the risk of developmental delays in children.

Key messages:

- Maternal anxiety was found to be a significant risk factor for developmental delay at 1 year of age.
- The association between maternal anxiety and child development was probably mediated by attachment.

Degree of consistency of parental dietary and sedentary behavior rules as indicators for overweight

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Background:

To increase our understanding of the effect of parenting on the child's likelihood of becoming overweight, we attempted to identify typologies based on how consistently parents apply dietary and sedentary behavior rules, and we examined whether these typologies are associated with energy balance-related behaviors in children and/or with the prevalence of overweight children.

Methods:

Data were obtained from a cross-sectional survey of the Community Health Service in Nijmegen, the Netherlands in which a total of 4,865 parents of children aged 4-12 years participated. Data were collected using validated self-report questionnaires. To identify typologies based on how consistently parents apply dietary and sedentary behavior rules, we performed latent class analyses. We then performed regression analyses to examine the correlation between these typologies and socio-demographic characteristics, dietary and sedentary behaviors, and overweight.

Results:

Latent class analyses revealed the existence of the following four distinct, stable classes/typologies; parents who have: (1) no dietary behavior rules, plus indulgent sedentary behavior rules; (2) indulgent dietary behavior rules, plus no sedentary behavior rules; (3) overall indulgent rules; (4) overall strict rules. Children of parents with overall strict rules (class 4) had significantly healthier dietary and sedentary behaviors compared to the children of parents in the other three classes. Children 8-12 years of age with parents in class 2 were the most likely to be overweight; compared to the children of parents in classes 1, 3, and 4, the parents in class 2 had the lowest level of education and the higher number of Turkish and Moroccan immigrants.

Conclusions:

These results underscore the need for parents to establish strict rules for their children, particularly regarding sedentary behaviour in order to minimize the child's likelihood of becoming overweight.

Key messages:

- The results underscore the need for parents to establish strict rules for their children, particularly regarding sedentary behaviour in order to minimize the child's likelihood of becoming overweight.
- These results may contribute to making healthcare professionals aware that children of parents who do not apply sedentary behavior rules are more likely to become overweight.

4.G. Chronic diseases: surveillance and management

Transitional care models for chronic patients: preliminary results from an umbrella review

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Worldwide, chronic diseases are burdening and the health systems need to be rethought to better manage this epidemiologic shift. One of the critical points in the care pathway of chronic patients is the transition from one care setting to another. Aim of this study is to provide an overview of the current evidence on the impact of transitional care programs on health and economic outcomes for chronic patients

Medline, Web of Science and EMBASE were queried for relevant reviews using the Population-Intervention-Context-Outcome (PICO) model. The quality of the included articles was determined using A MeaSurement Tool to Assess systematic Reviews (AMSTAR 2). Data were analyzed using descriptive statistic, and comparison among studies carried out in European Union (EU) versus non-EU was performed (Chi-square test was used and a $p < 0.05$ was deemed as statistically significant)

124 reviews were assessed for eligibility and 14 were eventually included (for a total of 167 primary articles). Quality appraisal was critically low in 60% of the reviews. Both hospital readmission rate and Emergency Department (ED) visit rate were lower than those in usual care group, but this difference was significant in 40% of articles. In EU studies readmission rate was lower in 65% of cases while in non-EU ones the percentage was 51.0%, but the difference was not significant ($p = 0.23$). Six reviews (43%) investigated the economic impact of the transitional care: most reported an initial increase in cost due to investment in staff training and creation of organizational networks, followed by a sharp decrease in costs due to a better utilization of health services, thus leading to a reduction in overall costs.

Compared with usual care, transitional care shows an overall cost reduction, even if with limited effects on re-hospitalization or ED visit rates. These findings should encourage decision makers to invest in the development of this kind of programs in order to identify models that best perform.

Key messages:

- The patient transfer supervision from one care setting to another is necessary for continuity of care, but there is no robust evidence about the better performance of transitional care models.
- Systematically reviewed transitional care models has been shown be more cost saving, with a moderate impact on hospital readmission or emergency department visits rates.

The use of quality indicators (QIs) to evaluate the oncologic care in CCCN: a systematic review

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Due to the increase of life expectancy for cancer patients, it has become necessary to implement complete and economically sustainable clinical care pathways that integrate different professional competences. The Comprehensive Cancer Care Network (CCCN) model consists of multiple specialized structures that cooperate for cancer patients care. Quality Indicators (QIs) represent valid and reliable tools of evaluation that allow a standardized comparison among different structures. The aim of this systematic review was to highlight a wide and complete description of the implemented QIs within the CCCNs and to identify and analyze methodologies used for the development of QIs. The literature was performed investigating two databases (PubMed and Scopus) and the search identified 7342 studies. After duplicate removal, title and abstract screening, and full text evaluation, 46 studies were included in the study. Most QIs were implemented in USA, Germany and Italy where the CCCN approach seems to be well defined. Eighty -two QIs concerned diagnosis, 260 concerned treatment, 7 concerned prevention, 29 about follow up, 71 about palliative care, 12 concerned rehabilitation and 7 research. The majority of the identified QIs belonged to the process domain, followed by the structure ones. Excluding QIs related to the management of cancer in general, the most represented organs resulted breast, colorectum and lung. Overall, it can be stated that the most represented categories of QIs concerned diagnosis and treatment. Furthermore, also the palliative care domain appeared very represented. Regarding the methodology of the QIs development, a consensus approach among experts and the Delphi method were the most frequently used methodologies. Only a few studies included the participation of patients for the implementation of the QIs. This systematic review provides a synthesis of existing QIs related to the setting of integrated oncological care

Key messages:

- The CCCN has been recognized as an ideal model for structuring the process of care that guarantees a complete and integrated approach for the management of oncological patients.
- Quality Indicators represent valid and reliable tools that should be used to perform a standardized comparison among different healthcare systems and to guarantee a homogeneous quality of care.

Clinicians' decision making about Parkinson's treatment plans using self-report vs digital data

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Background:

An mHealth-based support systems promise to deliver objective data about the patient's healthcare status to the clinician in a timely manner but at the same time, risks increasing 'technical uncertainty'', by increasing the amount of available information, but not necessarily its utility in making medical decisions.The study aim was to investigate clinicians' decision making about treatment and care plans based on the relative utility of subjective (reported by a person with Parkinson's Disease, PwP) or objective (digital health) information.

Methodology:

Clinicians completed an online questionnaire with 15 vignettes describing patient cases of PwP where information type (subjective, objective, subjective and objective) and symptoms / signs were manipulated whilst disease stage, duration and patient demographics were kept constant. Dependent variables were the likelihood of changing the care plan and the confidence in the decision. We also recorded the willingness to rely on subjective or objective information.

Results:

Clinicians were equally likely to change the care plan and were equally confident in their decision when receiving information from self-reports or the digital health devices' outcomes. The likelihood for change increased when both information sources provided consistent information. However, inconsistent information from both sources did lead to more conservative decision making, that is, clinicians were more reluctant to change the care plan.

Conclusions:

Clinicians consider digital health information equally as useful and trustworthy as patients' self-reports for their care plan decisions. This finding corroborates the potential utility of wearable technology and mobile devices for symptoms' monitoring. Facilitating clinician's feedback on situations where subjective and objective sources provide conflicting information is an important consideration for the development and improvement of clinical decision support systems (DSS).

Key messages:

- It would be important to identify conditions and mechanisms that could give rise to this conflicting information and the impact that that could have on patient care.
- Guidelines (e.g., more frequent appointments to monitor the situation) could then be put in place to deal with these situations.

Perceived health and quality of life in chronic and end-stage kidney disease

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Background and objectives:

Health-related quality of life (HRQoL) is increasingly considered a major outcome in patients with chronic kidney disease (CKD), but the size of its effect on physical and mental health at different disease stages, compared with the general population, is unclear.

Design, setting, participants, and measurements:

We compared HRQoL measures in four groups: 2,687 outpatients with moderate (stage 3, estimated glomerular filtration rate [eGFR] 30-60 mL/min/1.73 m2) or advanced (stage 4-5, eGFR < 30 mL/min/1.73 m2) CKD under nephrology care from 40 nationally representative facilities, 1,658 patients with a functioning graft, 1,251 dialysis patients randomly selected from the national REIN registry, and 20,574 participants in the French Decennial Health Survey, representative of the general population.

Results:

Mean age (years) was 67, 69, and 55 in patients with non-end-stage CKD, on dialysis, or with transplants, respectively; 60% were men. Age- and gender-standardized health status was perceived as fair or poor in 27% of those with moderate CKD and more than 40% of those with advanced CKD and those on dialysis, compared with 12% in transplant patients and 3% in the general population. Compared with the general population, HRQoL physical scores adjusted for age, gender, education, obesity, and diabetes, were significantly lower, by a factor of 2.2 among patients with moderate CKD, 4.1 among those with advanced CKD, 10.2 among those on dialysis, and 4.1 among those with transplants. The effect was stronger for those younger than 65 years. The mental score was lower only for dialysis patients.

Conclusions:

This study highlights the importance of the physical health effects beginning at the moderate stage of CKD. More attention to patients' CKD-related perceived health is needed.

Key messages:

- Physical health declined significantly from moderate through end-stage CKD, with impact greatest among the youngest patients.
- More attention to CKD's impact on quality of life is needed.

Development of ethical governance framework for an mHealth platform for the management of Parkison's

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Background:

The ubiquity of mobile devices promises to address the need for continuous management of chronic conditions at lower costs. Its rapid expansion, particularly in public health, is currently largely consumer-driven and lacking in acceptable frameworks for its wider adoption into the healthcare systems. The aim of this study is to identify the key parameters to consider in developing a governance framework for a Parkinson's Disease Management MHealth platform. The Parkinson's Disease Manager (PDM) system was developed to gather symptom information from patients with PD via wearable devices and a specially designed app and stored securely in a cloud, for use by clinicians, health researchers and policy makers.

Methodology:

Twelve stakeholders were interviewed in the UK including clinicians, data managers, the public. First, the participants' existing views about sharing personal and then specifically health data online were explored. Secondly, participants were introduced to PDM via a diagram and encouraged to explore the risks and benefits of the system with a minimum of guidance. Finally, they were asked what risks they thought might be posed by a series of specific scenarios presented through vignettes and how such issues might be addressed.

Results:

Thematic analysis identified eight emerging themes which clustered around two overarching categories: 1. The key challenges of the system identified included: Establishing appropriate governance; Protecting the data; Ensuring sustainability; Building trust; 2. The proposed solutions included: Ethically informed governance; Embedded data custodians; Sustainable funding and engagement; Trust through transparency.

Conclusions:

The patient's heuristic assessment of risks and benefits is mediated by trust, which can be initially gained by association with individuals and organisations already deemed trustworthy and then consolidated and sustained through transparency and delivering on promises.

Key messages:

- The effective system design, must ensure that standards of transparency, data protection and informed consent are upheld if the coming eHealth revolution is ever to realise its true potential.
- The use of diagrams and vignettes to support qualitative interviews helped elucidate the importance of balancing protection, utility and sustainability to build and maintain trust.

A Developmentally Appropriate Patient Education during Transition

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Introduction:

Patient education is recommended to improve transition from pediatric to adult care for young people living with chronic conditions. But a consensus has not been reached regarding a particular model. Our study aims to understand how to implement a Developmentally Appropriate Patient Education during Transition (DAPET), which would revolve around the young people's psychosocial development.

Methods:

Three focus groups were organized with healthcare providers and two focus groups took place with the parents of young people with chronic conditions. We relied on Activity Theory to explore practices and to identify obstacles, as well as recognize which resources were available to implement a DAPET.

Results:

Six themes were identitified via the thematic analysis. In summary, healthcare providers agreed on the need to engage in an educational approach centered on the psychosocial development of young people during transition. They did, however, highlight a lack of competencies in adolescent and young adult medicine and a lack of available resources to meet these goals. The parents wanted to redefine their role with healthcare providers in order to apprehend transition to adult care and to allow their children to develop self-management skills.

Conclusions:

Healthcare providers and parents considered the implementation of a DAPET to be acceptable and even advisable. However, this program's feasibility was questioned due to the perceived shortfalls of the hospital system as it currently stands and the ways in which an educational approach would be applied. An enabling environment is therefore required to facilitate the educational initiatives of healthcare providers and to encourage the participation of parents. The means and modalities for achieving this are discussed.

Key messages:

- Patient Education during transition from pediatric to adult care need to be developmentally appropriate.
- Healthcare providers need en enabling environment to carry on a developmentally appropriate approach during transition.

FC Prostate - Football for men with prostate cancer in local football clubs

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Prostate cancer is the most frequent cancer found in men. Physical activity has shown to counteract some unwanted psychological and physiological side-effects, however sustainable exercise concepts have been hard to achieve.

Since 2011 Danish researchers from The University Hospitals' Center for Health Research have tested, evaluated, and developed football training for men with prostate cancer. In the period 2011-2017 FC Prostate was conducted in three phases (I-III). Pilot study (I), a small scale randomized controlled trial (II), and the FC Prostate Community (III) conducted in a real-world setting in six Danish football clubs. Researchers found that participants who played football once a week or more improved their mental health and reduced fat mass. For some men with prostate cancer, football proved to be a sustained, and viable alternative to other types of physical rehabilitation.

Based on these research results the ambition in phase IV is to offer FC Prostate nationally. This task was undertaken by The Danish Health Committee (DCHE) and The Danish Football Association (DBU). During the period 2018-2019 DCHE and DBU have collaborated to initiate and implement local partnerships around each of the currently 20 active FC Prostate-teams in Denmark (spring 2019). DCHE have developed a simple model of collaboration. The model contains a clear division of relevant tasks and outlines a meaningful collaboration between municipal rehabilitation centers, hospitals, and local football club to run locally based FC Prostate-teams; covering such tasks as recruitment, training, and retention of men with prostate cancer in an active life style.

The main focus of the presentation will be the national implementation of FC Prostate, including experiences and identified barriers during the project, and expected outcomes based on the project development so far.

Key messages:

- Local club-based football is a viable alternative to other types of physical rehabilitation.
- Rehabilitation centers and hospitals are currently collaborating with local club to host and run FC Prostate-teams in Denmark.

A cross sectional survey to estimate prevalence of asthma in Reunion Island, Indian Ocean

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Background:

Previous studies on asthma mortality and hospitalizations in Reunion Island indicate that this French territory is particularly affected by this pathology. However, no estimates are provided on the prevalence of asthma among adults. In 2016, a cross-sectional survey was conducted to estimate the prevalence of asthma and to identify its associated factors in the adult population of Reunion Island.

Methods:

A random sample of 2,419 individuals, aged 18-44 years, was interviewed by telephone using a standardized, nationally validated questionnaire. Information was collected on the respiratory symptoms, description of asthma attacks and triggering factors for declared asthmatics, as well as data on the indoor and outdoor home environment. ''Current asthma'' was defined as an individual declaring, at the time of the survey, having already suffered from asthma at some point during his/her life, whose asthma was confirmed by a doctor, and who had experienced an asthma attack in the last 12 months or had been treated for asthma in the last 12 months. ''Current suspected asthma'' was defined as an individual presenting, in the 12 months preceding the study, groups of symptoms suggestive of asthma consistent with the literature.

Results:

The estimated prevalence of asthma was 5.4% [4.3-6.5]. After adjustment, women, obesity, a family member with asthma, tenure in current residence and presence of indoor home heating were associated with asthma. The prevalence of symptoms suggestive of asthma was 12.0% [10.2-13.8]. After adjustment, marital status, passive smoking, use of insecticide sprays, presence of mold in the home and external sources of atmospheric nuisance were associated with the prevalence of suspected asthma.

Conclusions:

Preventive actions including asthma diagnosis, promotion of individual measures to reduce risk exposure as well as the development of study to improve knowledge on indoor air allergens are recommended.

Key messages:

- Individuals with suspected asthma who have not been medically diagnosed have been identified. Consequently, the development of a strategy to improve the diagnosis of asthma on Reunion is recommended.

- Aerating homes to reduce indoor moisture and mould growth, maintaining hygiene standards through cleaning, limiting the use of spray insecticides and household cleaning sprays at home.

4.H. Skills building seminar: How to enhance collaboration between primary care and public health?

Organised by: Observatory
Chair persons: Matthias Wismar - European Observatory
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Many countries in Europe and beyond have recognized that improved collaboration between public health and primary care can yield substantial benefits to populations and patients (e.g. through improved chronic disease management, communicable disease control, and maternal and child health), but it is in practice unclear how this improved collaboration can be achieved. Furthermore, collaboration is often hampered by the way that both sectors are organized and financed, with substantial differences across and sometimes within countries. In most European countries primary care already performs some public health functions, while public health can help to make the provision of primary care more effective. Screening and immunization, for example, as well as interventions to support healthy lifestyles, are public health functions that are nowadays commonly provided in primary care, although with wide variations between countries in the number of preventive care services provided in primary care. The question is how to expand and further develop existing collaborations.

This workshop investigates the types of initiatives that have been undertaken, the factors that can enhance or hinder the collaboration between primary care and public health, and what can be undertaken to increase the chances of successful collaboration. It identifies organizational models of primary care that are conducive to collaboration with public health (e.g. through integrating primary care and public health in the provision of care for individuals), as well as systemic, organizational and interpersonal factors that can hinder or facilitate collaboration.

The workshop draws on the findings of a forthcoming Observatory policy brief on enhanced primary care and public health collaboration, covering such areas as community engagement and participation, health promotion, health education, prevention activities, chronic disease management, screening, immunization and communicable disease control, information systems activities, development of best practice guidelines, conducting needs assessments, quality assurance and evaluation, and professional education.

The workshop will begin with a presentation of the main findings of the policy brief, followed by a panel discussion involving European experts and policy-makers. In addition to sharing the experience of their countries, panelists will reflect on how generalizable or transferable examples of successful collaboration are and what it takes to overcome existing barriers. The workshop is designed to provide ample opportunity for the audience to comment on and discuss presentations and the contributions of panelists and to consider what lessons can be transferred across countries. It will be of interest to public health researchers, practitioners and policy-makers from across Europe.

Key messages:

- The workshop provides a forum for discussing how to enhance collaboration between public health and primary care.
- It explores innovative approaches, organizational models, and policy options.

How to enhance collaboration between primary care and public health?

Bernd Rechel

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Background:

There are almost universal calls for improved collaboration between public health and primary care, but it is less clear how this can be achieved in practice. This presentation summarises key findings from an Observatory policy brief on how to enhance collaboration.

Methods:

The policy brief iss based on a systematic review of the academic literature on collaboration between public health and primary care, searching the databases Medline and Embase for articles published since 2010. After title, abstract and full-text screening, 46 articles were retained and included in the review.

Results:

Most academic articles on collaboration between primary care and public health are concerned with the United States and Canada. From the European countries, the Netherlands and the United Kingdom are most strongly represented. There is also a very uneven timeline in publication, with a spike in articles published in 2012, following an influential Institute of Medicine report. Research has identified organizational models of primary care that are conducive to collaboration with public health, as well as systemic, organizational and interpersonal factors that can facilitate or hinder collaboration. However, the relative importance of these factors remains poorly understood. Improved collaboration between public health and primary care promises to bring major benefits, but these are rarely documented in the literature so far. Furthermore, collaboration may also bring certain risks, such as competition over scarce resources.

Conclusions:

The literature on collaboration between public health and primary care points to many illustrative examples, but also identifies relevant principles and factors that can hinder or facilitate collaboration. Policy interventions to improve collaboration will need to be mindful of potential risks and should aim to demonstrate benefits, which will help to increase buy-in from primary care and public health professionals and the public.

Panelists:

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4.I. Antimicrobial resistance and health care associated infections (HAI)

Does practice characteristics explain the impact of a financial incentive on antibiotic prescribing?

Philip Anyanwu

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Background:

About 80% of the antibiotics prescribed in England are from primary care practices. The Quality Premium (QP) initiative that offers financial rewards on the quality of specific health services commissioned is one of the NHS England interventions to reduce antimicrobial resistance through reduced prescribing. Evaluations of the initiative suggest a reduction in antibiotic prescribing in primary care. We investigated whether the effect of this financial incentive on antibiotic prescribing is explained by variations in practice characteristics that can contribute to differences in antibiotic prescribing.

Methods:

We used monthly prescribing data for 6,600 practices in England from NHS Digital for the year from April 2015 when antibiotic improvement was included as a QP priority and the preceding year. We fitted an initial linear generalised estimating equations model examining the effect of the incentive on antibiotic items/STAR-PU prescribed, adjusting for seasonality and number of months since implementation. We examined the consistency of the effect after the initial model was adjusted for variations in workforce, prevalence of co-morbidities (asthma, COPD, cancer, chronic kidney disease, diabetes), and deprivation index.

Results:

Antibiotics prescribed in primary care practices in England reduced by 0.20 items/STAR-PU (95% CI:0.19-0.21) after the implementation of the initiative. This reduction flattened off in the following months with a month-on-month increase of 0.013 items (95% CI:0.012-0.013). After adjusting for practice characteristics, the immediate and month-on-month impacts remained consistent with slight attenuation of the immediate impact (0.18, 95% CI:0.17-0.18). Subgroup analyses showed the effect of the initiative was significantly more among 20% top prescribers.

Conclusions:

Variations in practice characteristics are not a major explanation for the impact of the quality premium initiative on antibiotic prescribing in primary care practices in England.

Key messages:

- Our findings on the targeted impact of a financial incentive scheme to improve antibiotics prescribing on high prescribers are important to policymakers and antibiotic stewardship programs.
- Variations in practice characteristics are not a major explanation for the impact of a financial incentive scheme on antibiotics prescribing in primary care practices in England.

Multimodal Surveillance of HAI in an Intensive Care Unit of a Large Teaching Hospital

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Background:

Healthcare associated Infections (HAIs) represent a significant burden in terms of mortality, morbidity, length of stay and costs for patients in intensive care units (ICU). Surveillance systems are recommended to gather data in order to elaborate and evaluate intervention to reduce HAIs risk. Here we describe results of the multimodal surveillance system implemented in the ICU of a large teaching hospital in Rome from April 2016 to October 2018.

Methods:

The surveillance system integrated four different approaches: i) active surveillance focused on inpatients; ii) environmental microbiological surveillance; iii) surveillance focused on isolated microorganisms; iv) behavioral surveillance of the healthcare personnel. The system included the molecular genotyping of bacterial isolates through the pulsed field gel electrophoresis (PFGE). Moreover, an intervention to improve personnel adherence to hand hygiene (HH) guidelines was conducted.

Results:

Overall, 773 patients were included in the surveillance. The global incidence rate of the device related HAIs was 14.1 (95%CI: 12.2-16.3) per 1000 patient day. Monthly device related HAIs incidence rate showed a decreasing, from 26.9 per 1000 patient day in October 2016, to 4.9 in September 2018. The most common bacterial isolate was K. pneumoniae (20.7%), the 94.0% of which were multidrug-resistant. A total of 305 environmental bacterial isolates were retrieved and the most frequent was A. baumannii (27.2%), that was always multidrug-resistant. Genotyping showed a limited number of major PFGE patters in clinical and environmental isolates. Behavioral compliance to HH guidelines improved after the educational intervention.

Conclusions:

The data showed an overall slight decrease over time of the adjusted risk HAIs rates. Through the integration of information gathered from the four approaches, the application of this model returns a precise and detailed view of the infectious risk and of the microbial ecology of the ICU.

Key messages:

- Multimodal surveillance systems are effective to monitor HAI incidence and to determine the infectious risk.
- Genotyping techniques allows to characterize and link the clinical and environmental isolates.

Modeling Carbapenemase-producing Enterobacteriaceae episodes' evolution in France over 2010-2020

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Background:

Incidence of Carbapenemase-Producing Enterobacteriaceae (CPE) episodes within hospitals is rising at an alarming rate and threaten health systems and patient safety worldwide. Their number is growing in France since 2009 associated with inter-regional dissemination and importation of international cases. This study aimed at describing the dynamics of CPE episodes in France over 2010-2016 and forecasting their evolution for 2017-2020.

Methods:

Surveillance data of CPE episodes (imported and non-imported) from August 2010 to November 2016 were issued from the French national Healthcare-Associated Infections Early Warning and Response System. Impact of seasonality on the number of CPE episodes was analyzed using seasonal-to-irregular ratios. Seven models issued from time series analysis and three ensemble stacking models (average, convex and linear stacking) were used to describe and forecast CPE episodes. The model with the best forecasting's quality was then trained on all available data (2010-2016) and used to predict CPE episodes over 2017-2020.

Results:

Over 2010-2016, 3,559 CPE episodes were observed in France. Compared to the average yearly trend, we observed a 30% increase in the number of CPE episodes in September and October. On the opposite, a decrease of 20% was noticed in February compared to other months. We also noticed a 1-month lagged seasonality of non-imported episodes compared to imported ones. The number of non-imported episodes appeared to grow faster than imported ones starting from 2014. Average stacking gave the best forecasts and predicted an increase over 2017-2020 with a peak up to 345 CPE episodes (95% PI [124-1,158], 80% PI [171-742]) in September 2020.

Conclusions:

The number of CPE episodes is predicted to rise in the next years in France because of non-imported episodes. These results could help public health authorities in the definition and evaluation of new containment strategies.

Key messages:

- Time series modeling predicts an increase in the number of CPE episodes in France in the next few years with a quicker rise of non-imported episodes.
- An increase of 30% in the number of CPE episodes was observed in September and October with a 1-month lagged seasonality impact of non-imported episodes compared to imported one.

Risk factors for E. coli Susceptibility in Bloods Stream Infections in England Between 2013-2017

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Antimicrobial resistance (AMR) is a significant threat to global health. Escherichia coli is a frequent cause of Gram-Negative Bloodstream Infections (GNBSIs) and a key organism that contributes to the burden of AMR. This was a cross-sectional surveillance study that looked at 154,791 isolates between 1st January 2013 and 31st December 2017. Analysis was performed using routine surveillance data from Public Health England (PHE) containing data on the incidence and susceptibility results of E. coli bacteraemia. Exposure variables extracted were potential risk factors for AMR. The outcome variable was resistance to at least one antibiotic. Descriptive statistics and graphs were used to summarise the data. Associations between variables and the resistance to at least one antibiotic were assessed using univariate logistic regression. A multivariable logistic regression examined adjusted associations between the variables and resistance to at least one antibiotic. The final model included variables that showed strong evidence of association with resistance to at least one antibiotic. 43.2% of isolates were resistant to at least one antibiotic. Logistic regression showed an association between resistance of E. coli isolates to at least one antibiotic and children of school age (1.39 OR, 95% CI: 1.18-1.64; $p \leq 0.001$), isolates taken from patients in Greater Manchester (1.50 OR, 95% CI: 1.41-1.60; $p \leq 0.001$) and isolates taken from male patients (1.14 OR, 95% CI: 1.11-1.17; $p \leq 0.001$), on adjustment. Visual assessment of trend graphs showed a decrease in resistance for common carbapenems and piperacillin/tazobactam. Prevalence of resistance has increased for common cephalosporins, gentamicin, and co-amoxiclav. Initial analyses suggest an increase in rates of E. coli resistance to at least one antibiotic in GNBSIs between 2013 and 2017 in England. Findings of this study have implications for appropriate antibiotic prescribing guidelines and for directing future AMR policies.

Key messages:

- Initial analysis of the dataset suggests that rates of AMR of E. coli in BSIs have increased between 2013 and 2017.
- There is evidence of an increase in E.coli infections that are resistant to cephalosporins over time and a decrease in E.coli infections that are resistant to carbapenems.

The PACASurvE laboratory network for real-time infection surveillance and alert at a regional scale

Philippe Colson

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PACASurvE PACASurvE network
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Background:

Detection of abnormal phenomena is a key element of surveillance of infectious. Tools that count systematically in real-time infection-related parameters are needed. We implemented since 2002 a weekly monitoring system of infections based on clinical microbiology/virology laboratory data that expanded since 2013 to the Provence-Alpes-Côte d'Azur region (PACA), Southeastern France, through a laboratory network (PACASurvE). We describe its current extent.

Methods:

Microbial/virological diagnoses data were collected weekly from public/private medical biology laboratories (MBL) located in PACA (4.9 million inhabitants) and comprising the PACASurvE network. These data corresponded to counts of clinical samples, tests and positive diagnoses, and were anonymously integrated into an SQL database and analyzed with R/PHP. Alerts were automatically generated if weekly counts were above statistically-determined thresholds.

Results:

In March 2019, PACASurvE included weekly MBL from 17 hospital centers and 285 private MBL. Apart from Marseille public hospitals and regarding diagnoses by microbial culture, mean participation time was 3.3±1.6 years and 2,959,891 samples and 853,785 microbial isolates had been analyzed. For the whole network, 987 different microbial species were isolated during the 2013-2018 period. Besides, data for 110 other tests than microbial culture performed between 2014 and 2018 in 374 private MBLs to diagnose bacterial ($n = 50$), viral (58) or parasitic (2) infections were collected. These tests involved 157,161 patients and were positive for 17,412. Overall, dozens of alerts were generated weekly for clinical samples or pathogens and some triggered investigations and reporting.

Conclusions:

PACASurvE is a powerful tool to measure weekly the true incidence of infections in various clinical settings at a region scale. It alerts on abnormal rises, triggers investigations and reporting, and helps managing infections in a responsive manner.

Key messages:

- The PACASurvE network currently covers the majority of hospital laboratory and about half of private medical biology laboratories in PACA region.
- PACASurvE is a powerful tool to measure weekly the true incidence of infections, alert on abnormal rises, and trigger investigations and reporting.

4.K. Round table: Toward a better living with schizophrenia

Organised by: EUPHA (PMH)
Chair persons: Jutta Lindert - EUPHA (PMH)
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According to the Global Burden of Disease Study, schizophrenia causes a high degree of disability, which accounts for 1.1% of the total DALYs (disability-adjusted life years) and 2.8% of YLDs (years lived with disability). In the World Health Report [The WHO World Health Report: new understanding, new hope, 2001. Geneva]. In addition to the direct burden, there is considerable burden on the relatives who care for the sufferers. The workshop aimed to present and discuss different facets of what could be done for these persons and their families' members in the light of what has been done in some European countries, which have conducted reforms.

The round table will be introduced by presentations from two countries very much involved in psychiatric reforms which will present their attempts and results: first Italy with its emblematic radical deinstitutionalization model setting up a law to close down the psychiatric hospitals. The to-day situation will be presented underlying the huge diversity across Italian provinces and the dramatic lack of resources in some of them. Second the Portuguese reform will be described with a shift of psychiatric care toward general hospitals and its complete integration into health care catchment areas resulting in a increase of out patient acts among them home visits and a decrease of full time hospital admissions.

Then a French three-year research program that focused on themes that aims to improve the every day well-being of people living with schizophrenia will be presented. This program aimed to provid new insights on their integration from different angles: information about the disease by doctors at diagnostic annoucement, on internet and actions to take on health administrator training against stigmatisation that could be extended to a larger public.

Lastly the program allowed to interviewed face to face up to 67 people: 20 persons with schizophrenia, 20 person with bipolar disorders and 27 close ones to schizophrenic patients. A semi-structured interview collected information on the different aspects of care experiences plus "The Brief Illness Perception Questionnaire" allowed to measure and compare perceptions of the disease. This will allow to present the very positive effects of a program toward family members and patients themselves: "psychoeducation" that is a structured educationnal intervention which provides information and guidelines on how to react with their family member and influences positively the patient's outcome as the well being of both patient and family members.

Each presentation will extensively be discussed with the attendance and followed by some recommandations

Key messages:

- Although schizophrenia is a severe disorder much could be done to alleviate the burden on the patients and their family members.
- Reorganising the care systems trough adequate policies, setting up policies against stigmatisation and providing educational intervention should promote patients and families empowerment.

Community Mental Health Care in Italy: Basaglia's ashes in the wind of the crisis of the last decade

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Introduction:

In 1978, Italy approved the Law 180, which required the closure of all psychiatric hospitals. The three key points were: 1) A ban on the building of new psychiatric hospitals; 2) The principle that prevention, treatment, and rehabilitation have to be provided in community services; 3) The reason for requiring involuntary treatments was no longer dangerousness: involuntary treatments could only be required if a person needed an urgent treatment and he or she did not have - in that particular moment - the capacity for taking a decision.

Discussion:

Regional differences. The 1978 law has been "translated" into regional policies. The resources allocated to implement these policies were higher in the North and lower in the South Italy. The access to services and, thus, the health outcomes were found to be related to the availability of resources.

Decreases in resources:

Furthermore, the total amount of resources for the national mental health system in Italy shows a constant decrease from 2001 to date. Considering the percentage of mental health expenditure on the total public health expenditure, today the European countries with an income similar to Italy spend 10% of their health budget for mental health; Italy spends half of it. In this new scenario, the Italian associations of users and families have denounced abuses during involuntary health treatments and in the so-called shelter-houses.

Lack of a scientific approach. Another critical point of the reform is the poor scientific testimony of what has been done.

Conclusions:

Italy created a revolutionary approach to mental illness in a historical framework in which this country was in economic expansion and produced a great cultural expression. At that time, we were accustomed to 'believing and doing' rather than to questioning results. With the economic and cultural crisis, Italy has guilty neglected mental health.

Any future humanitarian approach to mental health should take this experience into account.

Improving access to integrated mental health services in community-based settings in Portugal

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Background:

Scientific evidence has proven greater effectiveness of community-based mental health care offering a diversity of services. Among the main barriers to mental health treatment are difficulties in the access and poor integration with general health services.

Description of the problem:

The current Portuguese National Mental Health Plan promoted the transition from psychiatric hospital-based care to care provided by a network of services in the community with the inpatient unit in the local general hospital. In this presentation we will describe the main aspects of the mental health reform and some figures illustrating the functioning of one of the new mental health departments.

Results:

Since 2006 three large psychiatric hospitals were closed and mental health departments are now in place according to the new model.

One example, the HFF department of psychiatry, has developed an innovative comprehensive and integrated model based in the general hospital and the community, ensuring a close coordination with primary care teams and all other relevant stakeholders in the community, offering diverse answers to patients' needs, and preventing drop-outs.

Between 2000 and 2011, the number of admissions went from 486 to 451, first admissions from 40% to 36%, and the average number of patients treated in day hospital from 12 to 24. Liaison psychiatry consultations (2713 to 3684), community teams' visits (10,201 to 14,756), and home visits (236 to 980) have increased significantly, while rehabilitation programs were developed in two day centers in the community.

Conclusions:

The Portuguese model of mental health care, based on the principles of accessibility and equity, community involvement, recovery and human rights, and continuity of care, has promoted greater accessibility, higher quality of care, and less stigma. An important integration of mental health and general health services has taken place allowing for a close collaboration between services.

Toward a Better Living with Schizophrenia

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"Toward a Better Living with Schizophrenia" is a French three-year research program that focuses on themes that aims to improve the every day well-being of people with schizophrenic psychoses by providing new insights on their integration:

-The announcement of the diagnosis to the person herself and/ or to the close ones:the positive consequences of a sound information and recommendations for a strategy.

-The search for information on the internet: persons living with Schizophrenia are using the web to gather information on their problems and on treatment ; some recommendations were listen to secure and improve web sites.

-How a short training of French health authorities staff members not involved in patients care, could decrease significantly their negative vision of such persons.

-67 people were interviewed face to face: 20 persons with schizophrenia, 20 person with bipolar disorders and 27 close ones to schizophrenic patients. A semi-structured interview concerned: the availability of staff, their feelings during the hospitalization and at discharge, the offer of psychoeducation; "The Brief Illness Perception Questionnaire" allows to measure and compare perceptions of the disease: its duration, prognostic, compliance, stigma and the beliefs about the causes of schizophrenia.

Results show less threatening perceptions of the disease for the persons themselves than for close ones. A better access to diagnosis is associated with a shorter perceived probable duration of the disease, while an easier communication with healthcare professionals is associated with the perception of a better efficiency of the treatment. Family psycho-education is associated with the perception of less frequent symptoms of the person.

These results will help to better integrate families, who seem to feel relatively isolated and shut down in the healthcare process, despite the strategic role they could play and despite the many recommendations of public health policies in that matter.

Effect of family psychoeducation and access to information on illness negative perceptions: a study on French families of persons experiencing schizophrenia

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Background:

A better understanding of schizophrenia, a chronic disease often leading to heavy negative consequences both on users and families, has been shown to reduce those difficulties. Studies recommend family psychoeducation, as this structured educative intervention reduces parents' depressive symptoms, enhances family mood, and decreases risks of relapse for users. Our objective is to assess whether family psychoeducation and access to information has an effect on close relatives' illness negative perceptions.

Methods:

Our sample consists in 27 close relatives of persons with schizophrenia. We used a semi-structured interview assessing access to psycho-education and information about illness and diagnosis. We also used the Brief Illness Perception Questionnaire, which explores various illness negative perceptions, as well as probable causes of the illness.

Results:

A better access to diagnosis for families is associated with a shorter perceived probable illness duration ($p = .044$). Family psychoeducation programs, followed by 38,5% of close relatives, reduces their perception of the frequency of user's present symptoms ($p = .029$). This could be caused by a better understanding of real symptoms, or by an enhancement of family mood. Also, family psychoeducation has an effect on causal attributions: 50% of close relatives with access to family psychoeducation believed in a substance abuse causality, opposed to 12,5% of the others ($p = .036$).

Conclusions:

Family psychoeducation could help allowing a shift in causal attributions and more generally enhancing family reaction to the disease, which, in turn, can have an impact on the user's recovery process. Thus, this intervention deserves more attention and should be more systematically proposed to French families, alongside with an easier access to information.

4.L. Innovative care for older adults

The Nordic @geing Online project: Co-creating a social application together with older adults

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Background:

Online resources present various possibilities for health promotion, also in the growing older adult population. Tailored online services aiming to support social participation among users could potentially promote older adults' psychosocial health. In the @geing Online project an online application is developed, focusing on access to meaningful social activities among older adults in rural areas in Finland and Sweden. The innovation project (2017-2020) is funded by the Interreg Botnia-Atlantica programme (European Regional Development Fund).

Methods:

A collaborative, user-centred design approach is applied when developing the online application, allowing older potential users and personnel groups from the social and health care sector to evaluate application features in a step-wise process. The inclusion of personnel groups allows for the exploration of the feasibility of introducing the tool in home care services and similar relevant contexts from an organizational perspective. Further, the inclusion of regional IT-companies presents opportunities for them to develop their competence regarding eHealth tools and older adults as a target group.

Results:

An advanced prototype of the application and its core features is presented. Promising approaches and outcomes regarding the co-creation methods applied to ensure the involvement of stakeholders in the development process are elaborated upon. Challenging issues related to the project theme, such as stereotypical and negative views of older adults' competences and motivation related to application use are also discussed.

Conclusions:

The project highlights possibilities - but also challenges - when co-creating a social application together with older adults, some of whom have no experience in internet use. The gathered project outcomes will provide lessons on the potential of new technologies for delivering health promotion initiatives among older adults.

Key messages:

- Tailored online services aiming to support social participation among users provide possibilities for promoting psychosocial health in the growing population of older adults.
- Application development utilizing a user-centered design approach can be implemented even if the end-users are not familiar with the internet or application use.

Neighborhood walkability related to knee and low back pain for older people: A multilevel analysis

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Background:

Previous research has linked built environments to physical activity. However, the association between built environments and musculoskeletal pain is unknown. This study aimed to investigate the effects of neighborhood walkability as a built environment on the knee and low back pain for older people.

Methods:

Data were from the Japan Gerontological Evaluation Study (JAGES) 2013, a population-based study of independent people from aged 65 and older. A cross-sectional multilevel analysis was performed on 22,892 subjects in 792 neighborhoods. We used neighborhood walkability as regional level residents' perception of access to parks and sidewalks and fresh food stores and difficulty in walking due to slopes and stairs and population density. Knee and low back pain which restrict daily life within the past year were our objective variables.

Results:

The prevalence of knee pain was 26.2 %, and that of low back pain was 29.3 %. Neighborhood walkability was positively associated with knee and low back pain after adjusting for individual confounders and mediators such as physical activity, a quarter increased perception of access to parks and sidewalks decreased the prevalence of knee pain (PR: 0.85, 95% CI: 0.77-0.94), a quarter increased perception of access to fresh food store decreased the prevalence of knee and low back pain (PR: 0.90, 95% CI: 0.84-0.96, PR: 0.92, 95% CI: 0.86-0.98), a quarter increased population density decreased the prevalence of knee and low back pain (PR: 0.95; 95% CI: 0.93-0.98, PR: 0.96; 95% CI: 0.94-0.98). This trend remains after adjusting the population density, and higher difficulty in walking due to slopes and stairs is newly significant to knee pain (PR: 1.09; 95% CI: 1.01-1.18).

Conclusions:

Some of the neighborhood walkability has a protective relation to the knee and low back pain for older people. Longitudinal and intervention studies of the built environment for musculoskeletal pain are required.

Key messages:

- To our knowledge, this is the first study to discover that neighborhood walkability has a protective relation to knee and low back pain considering various adjustments in a large-scale survey.
- Improvement of built environments could potentially reduce musculoskeletal pain. In the future, not only individual factors but also environmental determinants of pain should be studied.

Interrupted time series analyses on the effect on integrated care among the older population

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Background:

Current health and social care systems in most European countries, are highly fragmented into specialist services, and poorly designed to provide health and social care for patients with multiple health problems and social needs. As some groups of patients might have greater difficulties navigating in a fragmented and divided system than others, current system also risks increasing inequalities in access and use of health and social care services. The aim of this study is to investigate if a comprehensive integrated care system perform better than 'standard care' in regards to emergency department visits, hospitalization for ambulatory care sensitive conditions (ACSC), costs and re-admissions as well as increase equity in health care among older people.

Methods:

This study is an intervention study based on a comparative interrupted time series design comparing data from Norrtälje, where an integrated care system was implemented in 2006, with other areas of Stockholm county with a standard care system. The time series consists of register data from 2000-2015, obtained from the Stockholm County Council's administrative database of healthcare utilization and population data on socio-demographic characteristics from national registers.

Preliminary results

The preliminary results based on data from 2000-2011 suggest that the introduction of an integrated care system in Norrtälje did not affect the rate of hospitalization for ACSC, costs or rates of emergency department visits. When stratifying on income group we saw that the lowest income group did improve in some of the outcomes.

Conclusions:

The integrated care system in Norrtälje seems to have no significant effect on the outcome measures included. Whether socioeconomic inequity was affected is still to be investigated further.

Key messages:

- In this study we used interrupted time series to investigate organisational changes in the health care sector.
- Introducing integrated care in Norrtälje seems to have little effect on register based outcome measures.

Assessments, evolutions and transformations in French nursing homes

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Background:

Korian is a private group specialized in medical accommodation for elderly and dependent people. A professional data warehouse EasySoins® set up in 2010 hosted 126 nursing homes (NH) residents' data. Then in 2013, another data warehouse NetSoins® replaced the former; with a completely new information system (IS). Deployment ended in July 2014 with 151 NH but since then, the number of NH has increased steadily to reach 288 at the end of 2018. Inside both systems, the transmissions' table fed on a daily basis by the caregiver contains key data about the residents' care and health. It also allows us to build residents' life trajectories. A recent study compared the 2011 and 2015 NH populations in France. Other research papers explored similar issues in the USA, Belgium and Great Britain. The objective of this study is to show that our data extraction method offers a vivid image and faithful reflection of the French residents' population evolution over time.

Methods:

Wanting to replicate and update the French study, we built two sets of Korian residents: those having at least one transmission over the last six weeks of 2014 and 2018. We then joined these two tables with their socio-demographic profile. Finally, we searched among the residents' autonomy level evaluations (GIR = ISO resource group), the 'nearest' ones to each periods. We were then able to assess the residents' population evolution.

Results:

We found respectively 12,279 residents living in 156 NH and then 23,926 residents, living in 288 NH. In 2014, 9,174 women with a mean age of 87.5 (standard deviation = 7.4) and 3,105 men with a mean age of 84.6 (standard deviation = 9). In 2018, 3,075 were still there (25%) with 17,561 women, mean age of 88.4 (standard deviation = 7.5) and 6,365 men, mean age of 85.2 (standard deviation = 9.4). The GIR modal class stayed stable at two for both sexes at 30%.

Conclusions:

As elsewhere, men and women are growing a little older, reaching a glass ceiling, with a narrowed gender gap.

Key messages:

- As nursing home residents' profiles are rapidly changing over time and caregiver resources do not increase accordingly, allocating adequate resources to every resident becomes essential.
- The transmissions' table with its nursing care narratives textual content can help us track every resident on almost real time and, through this process, define health paths and health subgroups.

In-home monitoring evaluation by home-dwelling older adults, caregivers and healthcare providers

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Background:

In Europe, population ageing is increasing the healthcare needs and costs. Both frailty and chronic diseases affecting older people reduce their ability to live independently. However, most older people prefer to age in their own homes. New development of in-home monitoring can play a role in staying independent, active and healthy. Our objective was to evaluate a new in-home monitoring system among home-dwelling older adults (OA), their family caregivers (FC), and their healthcare providers (HCP) for the support of home care.

Methods:

The system continuously monitored OA's daily activities (e.g., mobility, sleep habits, fridge visits, door events) at home by ambient sensor system (DomoCare®) and health-related events by wearable sensors (Fitbit®, ECG). In case of deviations in daily activities (e.g., changes in mobility), alerts were transmitted to HCP via email. Using specific questionnaires, the opinion of 13 OA, 13 FC, and 20 HCP were collected at the end of 12-month of follow-up focusing on their user experience and the impact of in-home monitoring on home care services.

Results:

These preliminary results underlined that the majority of OA, FC, and HCP consider that in-home sensors can help staying at home, improving home care, reducing family stress, and preventing domestic accidents. The opinion tended to be more favourable toward ambient sensors (80%) than toward Fitbit® (67%) and ECG (64%). On average, OA (80%) and FC (73%) tended to be more enthusiast than HCP (63%). Some barriers reported by HCP were a fear of weakening of the relationship with OA and an excessive surveillance.

Conclusions:

Overall, the opinion of OA, FC and HCP were positive related to in-home sensors, with HCP being more mixed about their use in clinical practice.

Key messages:

- In-home monitoring technologies seem to be generally well accepted.
- In-home monitoring technologies could be help facilitating home care of older people.

Impact of integrated care on the use of emergency care among older people in Stockholm County

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Background:

In Sweden, health care is a regional responsibility and social care of older people is a municipal responsibility. The system is fragmented and the use of emergency care by older persons is rising. Better integration, coordination, and collaboration between health and social care providers is necessary to address the complex needs of an ageing population. Since 2006, Norrtälje municipality in Stockholm Region has integrated health and social care. This study aims to assess the impact of the integrated care system in Norrtälje on rates of emergency care visits, compared to the rest of Stockholm county.

Methods:

A repeated cross-sectional study with an interrupted time series analysis compared the integrated care system in Norrtälje to a matched control from Stockholm county, using. population-based register data between 2000-2015 obtained from Stockholm Region's administrative database of healthcare utilization and from the Longitudinal Integration database for Health Insurance and labour market studies from Statistics Sweden.

Results:

There was no statistically significant difference in the post-intervention rates of emergency care visits in Norrtälje compared to the matched control. However, there was a decreasing trend in the rate of visits among females 65-79 years, those in lower income groups, those living alone and those born outside of Sweden.

Conclusions:

The implementation of the integrated care system in Norrtälje had no statistically significant impact on the rate of emergency care visits among older persons compared to standard care. However, there was a reduced rate of visits among potentially vulnerable sub-groups. Further research is needed as the full implementation of the Norrtälje Model was completed as recently as 2016 and the full impact may not yet be realised.

Key messages:

- Bringing about change in the delivery of health and social care is complex and challenging. Thus, to observe differences in the utilisation of emergency care requires more time and resources.
- Innovation in the delivery of health and social care is needed to effectively manage and coordinate the ever changing needs of older persons with complex needs given the current fragmented services.

Factors associated with uptake of abdominal aortic aneurysm screening by older men living in Scotland

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Background:

High uptake is essential for abdominal aortic aneurysm screening to be effective. The aim of this study was to assess the influence of rurality, social deprivation, clinic type, distance to screening clinic and season on uptake of abdominal aortic aneurysm screening by men aged 65 years.

Methods:

Screening in Grampian was undertaken by four trained nurses in eight community and two hospital clinics. Men aged 65 years were invited for screening by post, with two further reminders for non–responders. Abdominal aortic aneurysm screening data are stored on the national 'call-recall database'. The Scottish 'postcode directory' was used to allocate all invited men a deprivation index (Scottish Index of Multiple Deprivation), Scottish urban/rural category and distance to clinic. Multivariate logistic analysis was conducted using IBM-SPSS Statistics (version 24).

Results:

A total of 12,281 men were invited for screening between 1st November 2013 to 31 January 2017. Overall uptake was 87 per cent. The detection rate was 12.0 per 1000 men screen (95 per cent c.i. 9.9 to 14.0). The prevalence of abdominal aortic aneurysms increased with increasing deprivation, whereas uptake declined with increasing levels deprivation. On multivariable analysis a one point increase in SIMD decile was independently associated with a 1.10 (95 per cent confidence interval 1.08 to 1.12) increase in the relative odds of being screened. Uptake was consistently lower in the 'large urban area' of Aberdeen city compared to the other five Scottish urban/rural categories. Uptake was lower at community-based clinics. Season and distance-to-clinic were not independently associated with uptake.

Conclusions:

Social deprivation, urban/rural residence and clinic type were found to be independently associated with the uptake of abdominal aortic aneurysm screening among men.

Key messages:

- A more targeted approach is needed in the large urban area of Aberdeen because the impact of multiple social deprivation on uptake was found to be more substantial here.
- Encouraging high uptake remains essential for abdominal aortic aneurysm screening to be effective.

Impact of a community respiratory service on emergency hospital admissions

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Background:

A community respiratory service was implemented in the North West of Glasgow in January 2013, comprising a team of physiotherapists, occupational therapists and support workers, to provide education, self-management advice, and, where appropriate, treatment at home, for COPD patients, to reduce the risk of hospital admission. This study measures the impact of the service on emergency admission to hospital.

Methods:

COPD EAs were defined as emergency admissions to hospital with a primary diagnosis of COPD. Rate of COPD EAs per 1000 population aged 65 years+ in Glasgow City was compared before and after onset of the service, using segmented linear regression with 21-month pre- and 17-month post-intervention periods. COPD EAs for residents of South and North East Glasgow (S+NE) - areas with no such service in place - were used as a comparison group. The model adjusted for the rate of all-cause emergency admissions. Autoregressive terms were included in the model, as well as a fourier term to adjust for seasonality. Models were similarly run for outcome emergency admissions with COPD in any of the other five fields of diagnosis.

Results:

Adjusting for all cause EAs and changes in S+NE, thus factoring out the impact of other initiatives that may have affected emergency admission to hospital, the impact of the service was found to be a level change of -0.33 (-0.51, -0.16) and a trend change of -0.03 (-0.05, -0.02) COPD EAs per 1000 per month. This is equivalent to a predicted reduction due to the service of -0.88 COPD EAs per 1000 popn per month, in March 2015, and a relative reduction of 35.8%. Rate of COPD EAs per month reduced over time after the introduction of the service (from the point of full staffing). Rate of EAs with COPD in a field of diagnosis other than primary saw no significant change in level or trend associated with the service.

Conclusions:

The community respiratory service was associated with a significant reduction in the rate of COPD EAs.

Key messages:

- The Community Respiratory service was associated with reductions in emergency hospital admissions with COPD as a primary diagnosis.
- There was no significant change in emergency admissions with COPD as a secondary diagnosis, suggesting hospital attendance for patients with COPD overall reduced following the intervention.

4.M. Food, nutrition and diet

The European FOOD programme (Fighting Obesity through Offer and Demand)

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Designated by the WHO as one of the greatest public health challenge of our century, obesity in 2018 is still responsible for 1 in 5 deaths in different parts of Europe. A balanced diet is therefore essential for European citizens' health. Moreover, as employees spend a significant amount of their waking hours at work, it is a designated place to convey health promotion messages and improve the workers' eating behavior. The FOOD programme contributes to this objective by promoting healthy eating habits during the working day towards two complementary target groups: workers and restaurants, making the healthy choice more obvious and more accessible. The FOOD programme is a public-private consortium gathering representatives of Public Health Authorities, Nutritionists and Universities around the lead partner and coordinator Edenred in Austria, Belgium, Czech Republic, France, Spain, Italy, Portugal, Romania, and Slovakia. To meet its objectives, the Consortium followed a five-step methodology with a strong evaluation, enabling a qualitative and adapted set of actions. After a phase of analysis of the needs, communication tools were created to provide practical advice and recommendations to encourage healthy eating habits among the workers and restaurants.

Since 2009, 380 communication tools have reached 6,9 million employees and 521,000 restaurants. In addition, as part of the annual evaluation, barometers are being conducted towards employees and restaurants in order to collect their habits and perception of healthy eating during the working day. Since 2012, 82,600 workers and 7,700 restaurants answered the questionnaires. Return from the target groups confirms a change of perception in the last years as almost half of employees choose a restaurant based on healthy options. On their side, restaurants state a regular increase in the demand for healthy meals and reckon that they could learn more about healthy eating.

Key messages:

- Creating healthier eating patterns during the working day.
- Making the healthy choice the easy choice.

Eating habits trajectories of students using university canteens

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Background:

Diets among the young often do not meet recommendations thus increasing the risk of developing chronic condition in adulthood. The present study aims at evaluate dynamics of eating habits among university students using data automatically recorded by cashier transactions at canteen.

Methods:

The study population consisted of 8,338 students enrolled in bachelor courses at Pisa University in 2010-2014 and accessing canteens at least once all over their courses duration (three year). Analyses were performed merging the administrative archive of the University of Pisa and the database of cashier transactions at university canteens. The frequency of different food-groups choice over years was evaluated using a zero- and one-inflated beta regression models, while latent class analysis (LCA) and posterior probabilities derived from that were used to evaluate the evolution of eating habits.

Results:

In adjusted models, the proportion of fruit choices increased significantly in both the second ($\beta = 0.077[0.013]$) and third year of registration ($\beta = 0.233[0.018]$), similarly for vegetables ($\beta = 0.090[0.011]$ and $\beta = 0.065[0.015]$). Conversely, the selection of foods commonly labelled as unhealthy decreased over registration years. LCA revealed 4 different classes each year. The 4 classes distinguished ''healthy eaters'' (LC1), those often choosing sweets, potatoes and legumes (LC2 ''lazy eaters''), ''greedy and quick eaters'' (LC3) favoring the selection of fried foods, sandwiches and sweets while LC4 represented ''selective eaters'' composing their meals combining mainly grains and vegetables. The probability of being a ''lazy'' or ''greedy and quick'' eaters declined significantly overs registration years. ''Selective eaters'' almost doubled over years while the probability of belonging to the ''healthy'' class showed a weak increase over years.

Conclusions:

During the years following enrollment students tended to limit choices towards unhealthy foods in favors of healthier dishes.

Key messages:

- Intervention for the promotion of healthy eating among young adults is essential as awareness of choices may raised only in adulthood.
- The present work outline the use of digital traces for public health research.

Energy drink consumption pattern among university students in North East England

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Background:

Energy drinks (EDs) are popular beverages with young people, particularly in the UK. There is an emerging evidence base on the negative health impacts in children and adolescents, largely relating to the high caffeine and sugar contents of these drinks. However, no studies have been conducted to date focusing on university students in the UK. The purpose of this study was to investigate factors underpinning ED consumption, as well as health effects reported by students.

Methods:

An online survey was conducted with a non-representative sample of 900 students from the five universities in the North East of England. This included questions on ED consumption, perceived stress (10-item PSS), general health status, personal wellbeing (ONS4), lifestyle and use of other substances such as alcohol. Responses were analysed using SPSS.

Results:

84% of respondents ($n = 756$) had consumed EDs at least once, mainly while partying or during revision. Of these ED consumers, 542 (71.7%) reported experiencing symptoms following intake, with the most common being elevation of heart rate and palpitations. No associations were found between ED consumption and perceived stress or wellbeing, but an inverse U-shaped association was observed with self-reported health (i.e. lowest consumption among those who rated their health as either ''very good'' or ''bad''). Consumers were more likely to be male, White, from the UK, less affluent backgrounds, and report having no religion. Co-consumption with alcohol was common in the cohort (46.2%). Those who used substances such as cigarettes, e-cigarettes and cannabis were also more likely to be ED consumers.

Conclusions:

ED consumption is highly prevalent in the student population, linked to socioeconomic and cultural factors rather than perceived stress or wellbeing. Prevention campaigns targeting students should aim to raise awareness of the consequences of chronic and acute ED consumption, particularly in conjunction with other substances.

Key messages:

- ED consumption is highly prevalent in the student population, often in conjunction with alcohol.
- Consumption is linked to socioeconomic and cultural factors rather than perceived stress or personal wellbeing.

Health impact of substituting red meat by fish: addressing variability in risk-benefit assessments

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Background:

Sufficient intake of fish and limited red meat intake is commonly encouraged by national dietary guidelines to prevent various lifestyle diseases. One way to fulfill these guidelines would be to substitute red meat by fish. However, quantitative evidence of the public health gain of such substitution is lacking. Moreover, contaminants in these foods may compromise nutritional benefits. We aimed to estimate the health impact of substituting red meat by fish in the Danish diet in a risk-benefit assessment (RBA). Our study can support policy makers in defining evidence-based public health strategies.

Methods:

We quantified the health impact of substituting red meat by fish among Danish adults in terms of Disability-Adjusted Life Years (DALY) using data from a national dietary survey and food monitoring. We investigated the use of probabilistic methods to model variability in individual substitution behaviors and to assess health impact distributions in RBA of food.

Results:

Health impact of the substitution varied largely by the type of fish consumed and by age and sex of the consumer. We estimated that 134 (95% uncertainty interval: 102; 169) DALYs/100,000 could be averted per year if a mix of lean and fatty fish is consumed in the Danish recommended amounts and intake of red meat decreased among Danish adults. The highest benefit was estimated for women in the childbearing age and for men above 50 years of age. However, a small fraction of women were assigned an overall health loss due to methylmercury exposure during pregnancy and the associated adverse effects in unborn children.

Conclusions:

Our study estimated an overall health gain of substituting red meat by fish in the general Danish adult population, while providing insight in the variability in health impact at the level of individual consumers. Our approach can be applied in other RBAs and the results support the need for targeted public health strategies to ensure consumer health and safety.

Key messages:

- The health impact of substituting red meat by fish in Danish adults was quantified in terms of disability-adjusted life years (DALYs), while accounting for variability between individuals.
- We estimated that young women and men above 50 years of age will experience the largest health gain while a small fraction of the women were assigned a health loss due to chemical exposure.

Macro- and micro-nutrient intake among Hungarian general and Roma adults

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Background:

Few studies have been conducted with reference to dietary intake among adults in Hungary and none among Roma. In this study, we assess dietary intake of both Hungarian general (HG) and Hungarian Roma (HR) adult population and provide an up-to-date preview on highly health-relevant macro- and micro-nutrient intakes and dietary profile of the HG and HR adult population.

Methods:

The study population comprised 797 Hungarian adults (HG: N = 410, response rate = 82% and HR: N = 387, response rate = 79%), representative in terms of geographic, sex and age distribution with the general population aged 20-64 years, from the 2018 GINOP Complex Health Survey. Energy and selected nutrient intakes were calculated with NutriComp v.3.0, based on a qualitatively validated double 24 hours dietary recall, adopted for the Hungarian population.

Results:

Total daily energy and selected nutrients intake among HG and HR adult subjects are reported. In spite of the presence of diluted underestimation effects, intake of nutrients with high relevance to health (i.e. sugars, sodium, saturated fats, cholesterol, etc.) remains relatively high, while consumption of fibre-rich products and beneficial nutrients appear to be low, particularly among Roma. Considering both health and environmental impact of the diet, animal-based proteins are way over the target value (i.e. 6%E) of the recent EAT-Lancet report.

Conclusions:

Findings provide data on dietary patterns of HG and HR with nutrient-level estimations, highlighting the importance of establishing and integrating Roma nutrition in national surveillance and monitoring systems for key dietary risk factors. Public health strategies to modify current dietary patterns in Hungary are a great opportunity for improving nutrition, health and environmental impact of dietary choices, especially within the current framework of the UN Decade of Action on Nutrition (2016-2025).

Key messages:

- Our study highlights the importance of establishing and integrating Roma nutrition in national surveillance and monitoring systems for key dietary risk factors.
- Current findings warrant further investigations of the nutritional and dietary patterns among Hungarian General and Roma adult population and their impact on health and environment.

Taste and food preferences of the Hungarian Roma population

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Background:

Behind the unfavorable health status of the Roma population, harmful health behavior is also supposed to exist, such as unhealthy nutrition.

Methods:

In the framework of a complex comparative health survey individuals, representative of the Hungarian general (n = 410) and Roma populations (n = 387) were randomly enrolled. In the questionnaire-based part of the survey, sweet, fat, salty and bitter taste preferences were ascertained by question items measuring taste and food preferences. Preference for sweet versus salty foods was also analyzed. Questions from the Hungarian version of the European Health Interview Survey were included, to characterize fruit and vegetable consumption and to determine the quantity of added sugar to consumed foods and beverages and the frequency of salting without tasting the food. The data were analyzed using STATA 9.0 statistical software.

Results:

Roma reported significantly less frequent consumption of fresh fruits (OR = 1.84, 95% CI: 1.43-2.37, $p < 0.001$) and vegetables (OR = 1.64, 95% CI: 1.27-2.11, $p < 0.001$) than the Hungarian subjects. Roma had higher preferences for sweet (OR = 1.57, 95% CI: 1.21-2.04, $p < 0.001$) and salty foods (OR = 1.33, 95% CI: 1.03-1.71, p = 0.029) and added higher quantities of sugar to consumed foods and beverages (OR = 1.88, 95% CI: 1.38-2.57, $p < 0.001$) and salted the food without tasting more often (OR = 2.18, 95% CI: 1.64-2.88, $p < 0.001$). They could be characterized by lower preferences for bitter tasting kohlrabi (OR = 0.64, 95% CI: 0.49-0.82, p = 0.001), grapefruit

(OR = 0.47, 95% CI: 0.36-0.60, $p < 0.001$), black coffee (OR = 0.48, 95% CI: 0.36-0.64, $p < 0.001$) and bitter chocolate (OR = 0.56, 95% CI: 0.44-0.72, $p < 0.001$) and preferred sweet snacks versus salty ones (OR = 0.56 for salty snacks, 95% CI: 0.42-0.74, $p < 0.001$).

Conclusions:

The Hungarian Roma diet may be linked to taste preferences predisposing to unhealthy nutrition. This assumption needs further studies on their nutritional behavior.

Key messages:

- Hungarian Roma taste preferences may predispose to unhealthy nutrition.
- Understanding the determinants of food choices is essential to the development of public health strategies targeting the Roma.

A multicentre study of street foods purchased in urban areas of Central Asia: the FEEDCities Project

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Background:

Street food (SF) is a strong tradition in Central Asia, where urbanization and westernization of food habits is occurring. Research on SF consumption is scarce, and crucial to understand its implications for public health. This study aims to describe the SF purchases in urban areas of Tajikistan, Kyrgyzstan, Turkmenistan and Kazakhstan.

Methods:

A cross-sectional study was conducted in Dushanbe, Bishkek, Ashgabat and Almaty in 2016/2017. SF markets (n = 34) and vending sites (n = 270) were selected by random and systematic sampling. Data on customers' characteristics and food items purchased was collected by direct observation. Nutritional composition of the food items (n = 852) was obtained by laboratorial analysis (n = 582) or food composition tables and labels (n = 270).

Results:

A total of 714 customers were identified. The most commonly purchased foods and beverages were savoury pastries/snacks (23.2%), main dishes (19.0%), sweet pastries/confectionery (17.9%), tea/coffee (11.3%) and soft drinks/juices (9.8%). Fruit was the least frequently purchased food (1.1%). Nearly one-third of customers purchased industrial food items; this proportion was significantly higher in Kazakhstan (43.2%) and Turkmenistan (32.3%). The median energy content of a SF purchase ranged between 352kcal (Tajikistan) and 568kcal (Turkmenistan). The median saturated (SFA) and trans fat contents were 4.74g and 0.36g, respectively; the highest values were 9.01g for SFA (Turkmenistan) and 0.60g for trans fat (Kazakhstan), accounting for 40.6% and 27.3% of the maximum daily recommendations, respectively. Sodium-potassium ratio was far above recommended, reaching the highest values of 6.57 and 5.17 in Tajikistan and Kyrgyzstan.

Conclusions:

Frequent purchase of industrial food reflects a shift to a westernized dietary pattern. Public health policies in these settings should aim to increase fruit availability and to improve SF nutritional composition, namely its lipid profile and sodium content.

Key messages:

- A relevant proportion of customers bought industrial foods, while fruit was rarely purchased, reflecting the nutrition transition process that is occurring in developing countries.
- Street food meals showed concerning levels of saturated fat, trans-fat and sodium, which must be considered when designing strategies targeted to improve the urban food environment in these settings.

Could chips and nuts be vector of food-borne outbreaks during happy hour?

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Background:

A Greater tendency to eat meals outside the home has led to an increase in the attendance of restaurants, cafes, and fast food. That is one of the reasons why the global interest in handling food has risen over the years. The aim of this study is to understand the level of microbial contamination in the food that is served along happy hour in cafe.

Methods:

This cross sectional pilot study was performed from April to May 2018 in the city of Siena, central Italy (<60000 citizens). Ten cafes were randomly selected. Samples of peanuts and potatoes were obtained in three different moments, at the beginning (T0), in the middle (T1), at the end (T2) of happy hours events. Collection of the samples was obtained using sterile kit and laboratory analysis was conducted in the University lab. The samples were located on selective medium and the growth of microbial pathogens were checked at 24 and 48 hours. The tested microorganisms were Enterococci, Staphylococci, Coliforms bacteria, Molds, and Yeasts. The statistical analyses were conducted using the Wilcoxon test using Stata 12.

Results:

A significant Yeasts contamination appeared only on chips at T0, while within T0 and T1 we found a significant increase of Enterococci, Staphylococci, and Yeasts ($p < 0.05$) both in peanuts and chips. Comparing T1 and T2 only Yeasts showed significant growth in potatoes ($p = 0.04$). Between T0 and T2 we also found the growth of Coliforms bacteria in peanuts ($p = 0.03$).

Conclusions:

We showed an increase in the microbial load associated with food handling, mostly of Enterococci. Long exposure time increased the likelihood of contamination and the possibility to exceed the dose for the occurrence of good outbreak. It is likely that offering small portions of handling food would reduce the manipulation by participants and the risk of food-borne outbreaks.

Key messages:

- Define the most frequent microrganisms could be associated with backed food and evaluate which one of these can exceed the dose for the occurrence of disease in long time.
- Reflect on the likelihood that the risk of food-borne outbreak caused by manipulation of happy hour participants, may result in an increase in hospital admissions.

4.N. Workshop: Health workforce coordination and agency across sectors, organisations and professions

Organised by: EUPHA (HWR), EUPHA (HSR)
Chair persons: Ellen Kuhlmann - EUPHA (HWR), Viola Burau - Denmark
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Background:

An increase in chronic illness and multimorbidity together with 'ageing societies' and demand for long-term care have created growing need for integrated care and improved coordination of services. However, health systems largely failed to respond to changing needs. Education and training of health professionals are still organised 'in silos'; connections between health and social care and other groups providing relevant services are usually absent; and fragmentation of care according to specialisation remains the dominant organising principle of healthcare services. In this situation there is an urgent need for change to build skills and competencies, use health human resources more effectively and rearrange care according to population needs and preventative approaches.

Objectives:

This workshop brings together research from different national and European research projects positioned at the interface of healthcare services and workforce development. The major aim is to foster the building of bridges across professions, organisations and sectors. The workshop seeks to explore the benefits and novel insights gained from comprehensive efforts to strengthen coordination and integrated models of care and how this may foster agency of the health professions as well as the implementation of new models of care that strengthen health promotion. The findings illustrate that capacity for innovating health systems can be improved through coordination and the crucial role of health professions in these transformations. Health professionals may act as facilitators of integrated work and care arrangements. Strengthening professional agency and coordination across sectors, organisations and professional groups embodies new opportunities for innovating health service provision and health workforce development. These transformations, in turn, may foster people-centred healthcare services.

Key messages:

- Building bridges between sectors, organisations and professions is a key to people-centred care.
- Coordination improves health workforce agency and service capacity to respond to population needs.

An international perspective on organisational strategies to foster skill-mix changes in healthcare

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Background:

The implementation of skill-mix innovations in healthcare organisations is a complex process which many factors affect, positively or negatively. Facilitators are factors which stimulate or expand skill-mix change, whereas barriers are factors that limit or restrict skill-mix change. This study provides an overview of the most common facilitators and barriers.

Methods:

An overview of systematic reviews was conducted as part of a larger project studying skill-mix innovations. 20 reviews on organisational-level factors related to the implementation of skill-mix innovations were included. The evidence from the reviews was supplemented with country case studies.

Results:

Organisational factors, such as physical proximity of services involved in the skill-mix or well-functioning information systems, are often discussed in the literature on skill-mix implementation at organisational level. The same applies to individual factors, such as required knowledge levels or (lack of) trust. Process factors and characteristics of the skill-mix intervention seem to play a less important role, even though coaching and support for professionals seem to facilitate the implementation process. The institutional environment mainly seems to have a hampering effect, especially related to a lack of financing, reimbursement issues or perceived fears of liability. Often, the implementation of skill-mix interventions at organisational level is approached by focusing on specific facilitators and barriers, yet little attention is paid to structural approaches.

Conclusions:

There is no single appropriate strategy for implementing skill-innovations that will fit all organisations. Managers must adopt an optimal strategy when implementing skill-mix, usually involving a combination of approaches best suited to local factors, to their specific organisational context and to the individuals involved.

Intersectoral coordination and diabetes prevention: building capacity through professional agency

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Background:

Intersectoral coordination of disease prevention is highly complex. The case of women who develop diabetes during pregnancy (GDM) is a case in point: intersectoral coordination mainly concerns diabetes prevention and thus stretches over the life course of women and their families. Our study aims to analyse how health professions through their day-to-day practice contribute to the creation, maintenance and transformation of intersectoral coordination of diabetes prevention over the life course; and how contexts at systems/organisational influences such processes.

Methods:

The study draws on organisational studies of professions and focuses on the mechanisms underlying the making of intersectoral coordination. As part of a pilot study, we conducted a review of the international literature on intersectoral coordination of public health, a review of national policy documents, and a secondary analysis of interviews conducted as part of the development of the Face-it intervention.

Results:

The organisation of GDM diabetes prevention in Denmark emerges as fragmented. Care pathways are divided between different phases, types of services, sectors and health professions. There are additional variations among municipalities. Formal (intersectoral) coordination is also limited to vulnerable women and their families. GDM diabetes prevention involves a broad range of professions; professional agency in GDM diabetes prevention is dispersed. Clinical specialists in hospitals show the strongest interest, rooted in healthcare knowledge on prevention. General practitioners have a similar knowledge base, but consider prevention less central. The same applies to health visitors and midwives, whose knowledge base also includes social care.

Conclusions:

Individual professions have a strong capacity for intersectoral agency. Strengthening this capacity requires alignment across professions and adaptation to specific contexts.

Intersectoral coordination and multiprofessional teams: merging primary care and social services

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Background:

Since the 2000s, integrated care has been a policy aim in Finland. Reforms for creating larger care authorities have failed at national level, but municipalities have established regional joint health and social integrated care authorities. Our study focuses on integration of services for children and young people and adults' psychosocial care. The aim is to evaluate integration in terms of success and its underpinning factors in two authorities with merged primary and specialised healthcare and social services.

Methods:

South Karelia and North Karelia were selected as case studies, because these regions were pioneers in establishing integrated care authorities in 2010 and 2017. Document analysis and individual and group interviews with managers (32) and employees (22) were carried out; the analysis draws on Auschra's classification of barriers and facilitators of integration.

Results:

The regions (pop. 130.000-169.000) comprise a larger town, a specialised hospital and several rural municipalities. The integration of children's and young people's services is based on organisational changes, in which the services from primary healthcare, hospitals, social work and schools (pupils' and students' healthcare) were merged into one organisation. The health and well-being centres were created by bringing mental health, substance abuse services and social services into health centre facilities, but under their own managers. In both cases, the experiences are mostly positive but the success of implementation varies; commitment and cooperation between managers, shared goals and mutual understanding of each other's work as well as the planning process were crucial factors to support implementation.

Conclusions:

Comprehensive organisations with unified management foster integration. The implementation of multiprofessional work is facilitated by organisational culture and collaboration between managers.

Interprofessional collaboration in health promotion: changing tasks as leverage for innovation

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Background:

Increasing demand for interprofessional collaboration calls for change in organisational practice and interactions of professionals. Health promotion is a particularly interesting area for observing these changes, because it involves professionals with different disciplinary backgrounds usually also working in different sectors. In Denmark new health promotion strategies in organisations were introduced to engage professionals in new tasks and establish interprofessional ways of working. Our research aimed to explore how these strategies impact in professional practices, using a cookery project for children as a case study, which involved care assistants and school teachers.

Methods:

A qualitative case study was conducted to investigate how care assistants from a nursing home and school teachers implemented a cookery project in a Danish school; the focus was on joint care and teaching situations among the two professions and their users. Our data consisted of documents, participatory observations, and interviews with professionals; a sociological institutional framework was applied to analyse the data.

Results:

Institutional changes and the demand for joint care and teaching activities in the cooking project fostered new interprofessional collaboration. Three themes of new professional activities emerged: 1) 'interplay' related to making different generations collaborate on the tasks involved in the cookery session, 2) 'care' concerned with caregiving activities, and 3) 'learning'' focused on schooling on healthy food and cooking. The activities were related to traditional and new roles in professional practices of both groups.

Conclusions:

Changes in professional practices evolved in an informal manner from new tasks and 'lived' experiences in the cookery project. The specific practical tasks of health promotion offer an important leverage for future interprofessional collaborations.

4.O. Healthy places

Community infrastructure to boost social relations: a systematic review

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Background:

'Boosting social relations' in communities has been identified as a priority UK policy-related topic. An earlier scoping review identified evidence gaps in social relations & community infrastructure. We undertook a mixed method systematic review on this topic, which has potential for immediate practical impact.

Methods:

A comprehensive search included 11 databases (1997-2017), grey literature and citation checking. Studies of interventions to improve or make alternative use of community or neighbourhood places, reporting outcomes of social relations, community wellbeing & related concepts were included. Established validity checklists. Qualitative data was synthesised thematically and a narrative synthesis was produced. GRADE and CERQual approaches were used to rate the overall strength of evidence for each outcome.

Results:

51 included studies, mostly of poor to moderate quality, and mostly qualitative, provided moderate evidence that:

Community hubs may promote social cohesion, increase social capital and build trust, widen social networks, increase interaction, and increase knowledge or skills;

Changes to neighbourhood design may positively affect sense of belonging and pride in a community;

Green and blue space interventions that provide the opportunity to participate in activities or meetings may improve social interactions, increase social networks, bonding and bridging social capital, physical activity and healthy eating, and improve people's skills and knowledge.

There were also common themes relating to facilitators and barriers to successful interventions.

Conclusions:

There is moderate evidence that a range of intervention approaches to community infrastructure can boost social relations and community wellbeing. Future research should prioritise high quality evaluations using repeated measures and validated tools, and robust and credible qualitative evidence.

Key messages:

- There is moderate evidence that a range of intervention approaches to community infrastructure can boost social relations and community wellbeing.
- Community hubs may promote social cohesion, increase social capital and build trust, widen social networks, increase interaction, and increase knowledge or skills.

Do perspectives on healthy environment differ between health/social professionals and urban planners?

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Background:

In a multidisciplinary collaboration it is essential that professionals understand from each other what is meant by a healthy environment and of what aspects it consists. However, the field of health and social welfare and the field of urban planning differ in many aspects, including language. Therefore, this study examined: what is the perception of professionals in the field of health and social welfare and in the field of urban planning about a healthy living environment? And do these perceptions differ?

Methods:

Using the concept mapping method, 94 professionals (government and non government) in the city of Nijmegen(NL) were asked to generate statements on healthy living environment. Next, the professionals sorted these statements and rated them on priority and opportunity within urban planning processes.

Results:

In the brainstorm 45 professionals generated 136 statements. After clearing doubles, 92 statements were sorted by 32 professionals. Which, after analysis, resulted in a map of ten different clusters together indicating what professionals perceive as aspects of a healthy living environment.

There was agreement on priority and opportunity between both groups of professionals regards clusters urban quality and invited to move. The two groups professionals have different views about five clusters. Professionals of both fields agree on the three clusters with the least priority and possibilities. Interesting is the relatively limited possibilities that professionals see to stimulate healthy behavior and to improve social connectivity in urban planning.

Conclusions:

There is a consistency between professionals in the field of health and social welfare and in the field of urban planning about the most and least important aspects of healthy environment in urban planning process. It is interesting to see that, although there is a lot of agreement, there are also relevant nuances between both groups on priority and possibilities at 5 out of 10 clusters.

Key messages:

- There is a consistency about the most and least important aspects of healthy environment in urban planning process.
- It depends on the aspect of a healthy living environment if understanding and collaboration between professionals easy is.

Building bridges: Sustainable Urban Health in Hamburg, 2018

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Issue:

With most humans, globally, now living in cities, "Urban Health" receives increasing attention. For sustainably securing and promoting human health in the urban setting, a multitude of urban systems, fierce dynamics, and systemic interactions need to be considered. The goal is to provide an integrative view of Sustainable Urban Health (SUH), i.e. capturing the "forest" instead of merely the "trees". How is this possible, and what insights can be derived? A theory-based SUH approach, starting out from the Human ecology perspective, provides a framework which is compatible with WHO's Healthy Cities approach.

Methods:

Methods used include literature searches and managed cooperation, proceeding from a model exercise (published paper) to a full-scale book publication, thus building bridges across disciplines and societal sectors.

Results:

As for results, there is a comprehensive account of Hamburg SUH, including history, health status, governance, health care, rehabilitation, prevention and health promotion, "health in all policies" (e.g. economics, housing, mobility), and current integrative community projects. 100 authors delivered c.70 contributions. Activities around "health" are shown to constitute a remarkable element of urban culture, with room for improvement, e.g. concerning quality assurance on a systems level; more focus on sustainability (incl. environmental impact and overall future-proofing); and safeguarding relevant sources as a "collective memory". To take the issue forward in civic society, one venerable Hamburg NGO (founded in 1765) now established a SUH working group.

Conclusions:

The intensity and diversity as well as certain catch-up needs of SUH in a European metropolis are demonstrated. This "no regrets" approach meets with interest also in civic society. Once it is applied in multiple cities, innovative concepts and efforts can be compared easily, and get locally adjusted, for further strengthening SUH.

Key messages:

- Sustainable Urban Health (SUH), based on Human ecology, is an integrative "no regrets" approach and can cooperatively be applied anywhere, informing and guiding professionals and civic society.
- Even where activities around "health" constitute a remarkable element of urban culture, there is room for improvement, e.g. quality assurance on systems level, and more focus on sustainability.

Who, why, when and how do people use urban green spaces? A study of users from 18 parks in France

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Introduction:

Urban green spaces impact the individual and collective health of populations. At the city level, they act as regulators of environmental hazards and constitute collective protective factors. At the individual level, they constitute social spaces for encounters and rejuvenation. But, these functions depend on the use made of these green spaces which can be inequitable. This paper presents the results of the analysis of the use of green spaces in the 6 French cities selected in the WHO French Healthy City Network conducted as part of the GREENH-City research project.

Methods:

Based on park profiles, a qualitative survey was conducted among users of 3 different parks in each of the 6 selected cities with both observations and semi-directive interviews. Thematic analyzes were performed. Observed activities were classified into 8 groups (supervised educational, food, activities i.e. calm, commercial, artistic and cultural, physical non-sport, sports) and related to a specific use (professional/ personal, individual/ collective, authorized/ not and conflictual/ not). The uses described by the individuals interviewed were classified into 4 categories: attendance, utility, opinions and activities.

Results:

186 observations and 591 recorded and unrecorded interviews with individuals or groups were conducted in the 18 parks. Overall, calm activities are dominant. However, activities and uses differ between cities and within the city depending on the nature of the parks (ancient, new..), their management, their location (more or less central, located in a deprived area or not) and people expectations.

Conclusions:

Park uses are only partially dependent on amenities within the park. The nature of the park itself, its geographical location and its landscape characteristics seem to be decisive for the uses observed. These data are essential to inform public decision-makers and guide the creation and development of green spaces in cities in a vision of social justice.

Key messages:

- Urban green spaces can improve population health but their uses may be inequitable.
- Study of population use of urban green spaces may help to shape local policies towards more equity.

School environment and obesity in primary schools. An analysis of the WHO European COSI in Austria

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Background:

Overweight and obesity in childhood and the associated secondary diseases are constantly on the increase. Studies show that the school environment can have an influence on the weight of children. The Childhood Obesity Surveillance Initiative (COSI) of the WHO is a Europe-wide epidemiological monitoring of anthropometric sizes of school children aged six to nine, with Austria participating in COSI for the first time in 2016.

Methods:

A retrospective secondary data analysis based on two standardized questionnaires was performed. On the one hand, data on determinants specific to the school field were collected, on the other hand anthropometric data of children in third grade were measured. Across Austria, data from 97 schools and 2530 children were collected and evaluated using descriptive and inductive statistical methods.

Results:

In 43,3 % of the schools, an existing playground can be used outside school opening hours. 73,2 % of the schools integrate nutrition education into their school curriculum either as a separate subject or in combination with another subject. Milk and dairy products are available in 60,8 % of schools, fresh fruit in 63,9 % and vegetables in 51,5 %.

28,3 % of the examined, 8 to 9-year-old children are overweight or obese ($n = 658$), while boys have a significant higher BMI than girls ($p < 0,001$). Also, in urban areas children have a significant higher BMI on average than in rural areas ($p = 0,025$). No significant relationship could be identified between the duration of physical education lessons per week and the BMI. However, a significant difference in childreńs BMI became visible when school playgrounds were also accessible outside opening hours ($p = 0,018$).

Conclusions:

The alarming number of overweight children in Austria should be diminished through policies and further interventions. Schools can make a substantial contribution to this. The course of the development could be closely observed through possible further surveys by COSI.

Key messages:

- 73,2% of the schools include nutrition education in their curricula. Yet, about every third Austrian child aged between 8 and 9 is overweight, with boys being significantly more overweight than girls.
- If school playgrounds are accessible outside opening hours, the childreńs BMI is significantly lower. In urban areas, children have a significantly higher BMI than in rural areas.

Deterioration of housing environment and mental health of asylum seekers – a multi-level analysis

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Background:

Asylum seekers arriving in Germany are assigned to a local district and an accommodation centre wherein. We developed and validated a six-item questionnaire for rapid assessment of housing deterioration and investigated its association with inhabitant mental health.

Methods:

Using cross-sectional data from a state-wide survey in Germany, we applied a random-effects modelling approach to estimate the exposure effect of housing deterioration on depression and general anxiety among a random sample of asylum seekers, using validated instruments (GAD2/PHQ2) for outcome variables. Housing deterioration was assessed on six items (windows/glass, walls/roof, garbage, graffiti, outside spaces, overall living environment) resulting in a deterioration score as exposure of interest. Additionally, we assessed the instrument's intra- and inter-rater reliability and internal consistency.

Results:

Of the 412 asylum seekers living in 58 accommodation centres, 45.7% reported symptoms of depression and 45.0% suffered general anxiety. Most centres (76.7%) were based in urban municipalities and 45.7% of inhabitants were living in an accommodation centre hosting ≥ 51 inhabitants. Preliminary adjusted odds ratio for accommodation centres with highest deterioration (Q 4) was 2.07 (0.67-6.40) for generalized anxiety, compared to 1.17 (0.45-3.08) for centres with lowest deterioration (Q 1). For depression, preliminary odds ratio was 1.92 (0.87-4.27) compared to 1.26 (0.63-2.50). The validation study confirmed inter-/intra-rater reliability (Brennan-Prediger coefficient: 0.81 and 0.92, respectively) and internal consistency (Crohnbach's α: 0.80).

Conclusions:

There are higher odds ratios for generalized anxiety disorder and depression among asylum seekers based on higher deterioration of housing environment. A questionnaire for rapid deterioration assessment and identification of accommodations needing further evaluation has been developed and successfully validated.

Key messages:

- Deterioration of small-scale housing environment is associated with poorer mental health for asylum seekers living in accommodation centres.
- A highly reliable new tool has been developed for rapid assessment of deterioration status of accommodation centres and identification of those needing further evaluation.

Prevalence of home smoking bans in six European cities: a repeated cross-sectional study (2013-2016)

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Background:

Secondhand smoke exposure is responsible for over half a million premature deaths. With regulation now reducing smoking in most public enclosed spaces, one major source of indoor exposure remains the home environment. Home smoking bans (HSBs) are household rules that restrict smoking from certain (partial HSB) or all areas (complete HSB). Recent data suggest growing trends of HSB adoption over time, but it is not known whether time trends vary according to household characteristics.

Objectives:

The aim of this study is to examine changes in the prevalence of HSB in six European cities between 2013 and 2016, according to socioeconomic characteristics of the household and smoking behavior of household members.

Methods:

Data were collected in all schools participating in both waves of SILNE study in 6 European cities. A self-administered questionnaire was used, targeting students age 14 to 16 (n = 22,326). Students reported their parents' smoking status and if there was a HSB at their home. Detailed information on socio-economic characteristics were collected as well.

Results:

Between 2013 and 2016 the percentage of households with a complete HSB increased from 51.5% to 53.1%, while partial HSB increased from 30.7% to 32.1%. The prevalence of HSB increased in Hannover (G), Latina (I), Amersfoort (N) and Coimbra (P), whereas decreased in Namur (B) and Tampere (F). Socioeconomic differences in HSB were reduced, with larger increases in HSB in households with a lower parental educational level. Increases in HSB were observed among intact households, those without migration background and those with non-smoking parents.

Conclusions:

The increase in the prevalence of HSB observed in most cities and throughout a variety of household types and characteristics between 2013 and 2016 may reflect the effect of smoking denormalization in different social contexts. Further actions of the tobacco control community should target the most vulnerable groups.

Key messages:

- The percentage of households with a complete HSB increased between 2013 and 2016 in 4 out of 6 European cities.
- Increases in the prevalence of HSB over time were observed across all socio-economic groups.

4.P. Innovative approaches to professionalism, communication and care

Differences in attitudes of medical and dental students about e-professionalism on social media

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Background:

Since the use of social media (SM) has increased among health professionals, it is necessary to explore students' use of SM. Aim of this study was to recognize the patterns of SM use and difference in attitudes about e-professionalism on SM among medical and dental students.

Methods:

A cross-sectional study was carried out in the School of Medicine University of Zagreb and the School of Dental Medicine University of Zagreb in academic year 2018/2019. Data were collected using online questionnaires. Data were analysed by descriptive statistics.

Results:

A total of 698 responses were received, 411 from second and fifth year medical students (RR 69%), and 287 from first to sixth year dental students (RR 68%). Facebook was the most commonly used SM platform (99%), followed by Instagram (81%) and YouTube (72%). Dental students significantly more accepted friend requests from patients (28% vs 6%, $P < 0.001$), sent friend requests to patients (5% vs 1%, $P = 0.002$) and significantly more plan to use SM in interaction with patients (39% vs 16%, $P < 0.001$). Attitudes regarding what should be considered as unprofessional online behaviour significantly differed regarding posting patient photographs (90% medical vs 61% dental students, P < 0.001), posting interactions with unidentifiable patients (42% medical vs 23% dental students, P < 0.001) and inappropriate language use (72% medical vs 83% dental students, P < 0.001). Students would find useful existence of guidelines about e-professionalism (84% medical vs 90% dental students, P = 0.016).

Conclusions:

Results showed that dental students are more open to communicating with patients using SM. Results showed difference in attitudes among medical and dental students what constitutes unprofessional behaviour on SM. Results indicate the need to develop guidelines for students regarding e-professionalism.

Key messages:

- The difference exists in attitudes among medical and dental students what constitutes unprofessional behaviour on SM.
- There is a need to develop guidelines for students regarding e-professionalism.

A MOOC to disseminate key concepts related to the future challenges of the French health system

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Background:

The increase of life expectancy creates critical health needs that developed countries health systems have to deal with. They are also confronted to persistent health inequalities. A common vision of these issues may not be shared by the health care professionals, decision-makers and citizens. In the context of the launch of new public health laws in France, the French School of Public Health (EHESP) decided to offer a MOOC entitled ‘‘Public Health and Health System: transition and transformation’’ (2019).

Objectives:

The MOOC intends to raise awareness and increase understanding of public health challenges. It is designed for a wide audience of professionals, decision-makers and citizens in the French speaking world. The content was designed by a multidisciplinary team of academics from the EHESP (N = 50) and a network of health professionals (N = 21). The 6 modules address major themes of the recent health policies, e.g. social and territorial inequalities in health, health care security, health pathways, innovation or health democracy.

Results:

Over the course of 6 consecutive weeks, almost 7800 people have enrolled in this e-learning. They are provided with short teaching videos (109 capsules of 4-5’) and webinars, have access to a number of supplementary reading material and a variety of self-assessment. Active learning is enhanced via forum involving peers and teaching staff. The full course represents around 20 hours of teaching. So far, completion rate has attained 13% which compares well with usual rate for MOOCs. Participants include a wide range of professionals, students and citizens from 87 different countries (72% from France) and 50% had a master or higher degree. The overall satisfaction rate is 98%.

Conclusions:

This MOOC attracted the attention of a wide and diverse audience regarding the major public health issues. Some public health agencies have expressed interest in implementing the MOOC into their professional development program of their staff.

Key messages:

- Health system reforms are constantly implemented to face new public health challenges.
- A multidisciplinary MOOC can help raise awareness and understanding of the issue being addressed by new policies.

Evaluation of communication skills among physicians: A systematic review of existing assessment tools

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Background:

The importance of physician training in communication skills for behavior change counselling in the context of chronic disease management is increasingly recognized. However, little is known about the quality, utility and psychometric properties of existing communication assessment tools.

Objective:

This study systematically reviewed existing assessment tools used to evaluate communication skills among physicians.

Methods:

A systematic review was conducted in accordance with the PRISMA guidelines (CRD42018091932). Four databases (PUBMED, EMBASE, PsychINFO, SCOPUS) were searched up to December 2018, generating 3902 unique articles which were screened by two authors. A total of 57 articles met inclusion criteria and underwent full data extraction.

Results:

Selected studies were published between 1990 and 2018. A total of 45 different assessment tools were identified. Only 47% of the studies mentioned any theoretical basis underlying the design of the tool. The most prevalent communication skills assessed were information giving (46%) or gathering (40%), eliciting patients’ perspective (44%) and agenda planning (37%). Forty-two percent were tool validation studies, but the majority (61%) reported on only one psychometric property. Study quality, using the modified COSMIN checklist, varied considerably, with an average score of 4.5/9 ± 1.3 representing moderate quality.

Conclusions:

Despite identifying a high number of existing physician communication assessment tools, most were poorly validated and a high degree of heterogeneity in terms of skills assessed and study quality was observed. Most used in-person role-play exercises that are intrusive, expensive, and time-consuming, making them impractical for use within most medical contexts. Successful chronic disease management depends not only on feasible and effective communication skills training among physicians, but also on our ability to reliably assess skill acquisition.

Key messages:

- Training physicians’ behaviour change competencies is central to improving lifestyle changes among patients living with a chronic disease.
- Due to the major methodological shortcomings of existing communication assessment tools, we strongly recommend increased methodological rigor for the development of new tools.

Use of voice messaging via mobile phone to communicate female adolescents in Bangladeshi urban slum

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Problem:

Utilization of available maternal health services is comparatively low among adolescent population in Dhaka urban slum areas and lack of adequate knowledge is one major contributor to low service utilization among slum dwelling adolescent mothers.

Description of problem:

Dhaka urban slum dwelling female adolescents are difficult to reach adequately with health messages through traditional home visit by community health workers for counseling, because many of these adolescents in Dhaka urban slums have a job outside home. We designed and implemented an innovative health communication intervention ‘‘Health Boost’’ - an approach to provide reproductive, maternal and newborn health information for married female adolescents using the voice message system on mobile phone.

Methods:

We delivered ‘Health Boost’ (HB) voice messages to enrolled married adolescent girls, twice a week, with re-listening option. Pregnant and non-pregnant participants received separate sets of messages. Enrollment was started after baseline survey (September 2016) and continued during October 2016 - April 2017. Pregnant participants received messages at least for 6 months before delivery. For evaluation, we followed pre-post observation study design and had the endline survey in November 2017.

Results:

Comparing HB non-receivers at baseline (n = 321) and HB receivers at endline (n = 45), statistically significant improvement was revealed for knowledge on danger signs - (a) during pregnancy (55.5% vs. 93.3%; $p < 0.001$), (b) during child delivery (54.2% vs. 82.2%; $p < 0.001$), (c) for newborn (56.7% vs. 75.6%; $p < 0.02$). We also found significantly higher utilization of service among HB receivers: Utilization of antenatal care increased from 70.4% to 87.5% ($p < 0.02$); and use of postnatal care increased from 31.6% to 73.7% ($p < 0.03$).

Lessons:

‘Health Boost’ messages were instrumental and effective to increase knowledge and service utilization among married adolescent girls in Dhaka urban slum areas.

Key messages:

- Voice message is an innovative way to reach hard-to-reach population by using mobile phone technology.
- Voice messages were instrumental and effective to increase knowledge and service utilization among urban female adolescent population, for reproductive, maternal and newborn health.

MANTRA: a serious game improving knowledge of maternal and neonatal health and geohazards in Nepal

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Background:

Mobile technology is increasingly important for delivering public health interventions to remote populations. This research study developed, piloted, and assessed a serious game for mobile devices that teaches geohazard, maternal, and neonatal health messages. This unique mHealth intervention aimed at low-literacy audiences in low resource settings is part of the Maternal and Neonatal Technologies in Rural Areas (MANTRA) project: Increasing maternal and child health resilience before, during, and after disasters using mobile technology in Nepal. Specifically, we assess impact of the serious game to improve knowledge gain in our target audience.

Methods:

Co-creation with the MANTRA team and local stakeholders in Nepal identified core needs, developed appropriate pictograms and mechanics, and tailored the pilot game to the local cultural context. Through picture matching with immediate audio and visual feedback, the game teaches 28 learning objectives in three modules: maternal health, neonatal health, and geohazards. To assess the game, 35 participants were recruited in Kathmandu and villages in Kavre district. Sessions consisted of pre-test assessment, playing the game, post-test assessment, and a focus group to elicit qualitative feedback.

Results:

The knowledge assessment quantified knowledge gain. Overall, the group averaged a normalized 6.8 point improvement ($p = 0.000022$). Change in the geohazard module was 9.5 points ($p = 0.001$), followed by maternal health (7.4 points, $p = 0.007$), and neonatal health (4.3 points, $p = 0.83$). Four learning objectives had statistically significant change ($p < 0.05$). Feedback demonstrated high engagement, motivation, and usability of the game.

Conclusions:

This MANTRA study is a unique mhealth intervention of a serious game to teach core health and hazards messages to low-literacy audiences in rural Nepal. The pilot intervention demonstrated statistically significant knowledge improvement among participants.

Key messages:

- The pilot MANTRA mobile serious game intervention is a novel idea, to bring public health knowledge to difficult to reach vulnerable populations, including often ignored illiterate audiences.
- The pilot MANTRA mobile serious game intervention demonstrated a statistically significant knowledge improvement of geohazard, maternal, and neonatal health learning objectives among participants.

4.Q. Work participation and sickness absence

Creating national guidelines for assessing functional and work capacity of recently settled persons

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Problem:

The measurement of functioning in clinical practice should be systematic and comprehensive. However, different versions of the same functioning measure are used e.g. by physicians, psychologists, physiotherapists and occupational therapists. The TOIMIA network of experts aims to harmonize and develop the measuring of functioning in Finland.

Description of the problem:

With increasing immigration to Finland, a specific need for guidelines on how to assess functional and work capacity of recently settled persons was identified. Led by the National Institute for Health and Welfare (mobiTARMO-project, 2017-2020), guidelines for assessing functional and work capacity in the integration phase are in preparation.

Results:

The guidelines on assessing functional and work capacity in the integration phase include four principles:

1. Functional and work capacity assessment should be done with culturally and linguistically appropriate methods.
2. Assessment should be based on shared expertise of the professional and the client.
3. Assessment should be comprehensive, and take into consideration physical, psychological, social and cognitive functional capacity, activities of daily living, and environmental factors.

4. Assessment should be systematic and lead to further actions and necessary services.
5. The national guidelines will be disseminated as free online access material in the Terveysportti health portal to professionals in clinical practice and research.

Lessons:

There are specificities to the cross-cultural assessment of functional and work capacity of recently settled persons. National guidelines can be created through broad collaboration of different organizations, as in the TOIMIA network of experts in Finland.

Key messages:

- Jointly agreed principles on how to assess functional and work capacity in the integration phase benefit professionals and clients.
- National guidelines can be created, disseminated and taken into practice through broad collaboration.

The relation between hearing loss and sustainable employability of teachers

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Background:

Teachers need to hear well. Hearing loss (HL) hinders their daily work. HL is associated with burn-out, depression, sick leave and disability. New retirement policies in The Netherlands encourage people to work longer. Consequently, age-related HL will be an increasing occupational health problem, especially in communicative work such as teaching. Aim of the present study was to examine the relationship between HL and sustainable employability of teachers.

Methods:

We invited teachers to participate in an internet survey. Sustainable employability was measured with the reliable and valid Capability Set for Work Questionnaire. Secondary outcome measures were work ability, self-rated health and sick leave. To determine HL among teachers, we used an online speech-in-noise screening test, supplemented with 4 questions about hearing. Ordinal logistic regression analyses were conducted to examine the associations of HL with sustainable employability, work ability, self-rated health and sick leave, adjusted for age, gender, level of education, current hours at work, work content (teaching or a mix of teaching and other tasks) and working as gymnastics teacher. Odds ratios (ORs) and 95% confidence intervals (CI) were estimated.

Results:

Of the participating $N = 801$ teachers, $N = 521$ had normal hearing and $N = 280$ had hearing loss. HL was associated with a lower capability set (OR 0.56, CI 0.42-0.73), lower work ability (OR 0.34, CI 0.26-0.46), poorer self-rated health (OR 0.41, CI 0.30-0.55) and a non-significant trend towards more sick leave (OR 1.34, CI 0.98-1.85) as compared to normal hearing.

Conclusions:

Hearing loss in teachers was negatively associated with sustainable employability. This underlines the importance of assessing the hearing status of teachers, because of age-related HL especially in those aged 50+. Teachers with HL should be advised on supportive measures, e.g. hearing aids, improved acoustics in the workplace and tasks with less oral communication.

Key messages:

- Measuring the hearing status, e.g. in periodical health examinations, is highly advisable for sustained employability of teachers.
- Teachers with hearing loss should be counselled on possible interventions to support them in their work.

Goal-focused group intervention; sustainable health improvement but no effect on work participation

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Background:

Sick leave in Norway is high relative to other OECD-countries, but few of numerous work rehabilitation efforts are evaluated adequately. Financed by research and development grants from the Norwegian Work- and Welfare Directorate we explored the effect of goal-focused group intervention in the Norwegian Welfare organisation in Troms, Northern-Norway.

Methods:

In a randomised controlled trial, we compared a goal-focused group intervention to receiving a 3-month membership card at a local gym. Main outcomes were work participation, self-rated health (0-100), functioning EQ-5D, and subjective health complaints, (29 items, 0-3). Most participants were long time sick-listed, and recruited from welfare service caseworkers. We collected surveys at baseline, 3 and 15 months, and corresponding register data on work participation.

Results:

Participating persons, 89 in the group intervention and 63 in the gyms, were comparable in age and gender, 85% women. Self-rated health scores improved in both groups at 3 months. At 15 months, the control group were back at basis while improvement sustained in intervention group, Initial scores 50.9 (95% CI 47.4-54.4), 3 months 58.1 (52.4-63.8) and 15 months 58.6 (51.8-65.4). In favour of intervention the difference in difference of scores on subjective health complaints was 2.34, $p = .056$ at 3 months, and 4.01, $p = .035$ at 15 months. Mean total score on EQ-5D and daily living function improved significantly in the intervention group 8.09 - 7.67 (95% CI7.26-8.07), and 1.91-1.70 (1.53-1.86) respectively in 15 months. Work participation did not reflect these improvements. Both groups reached mean 98 workdays within 15 months follow-up.

Conclusions:

Goal-focused group intervention has the potential to improve self-rated health and functioning, but gives no immediate effect on work participation.

Key messages:

- Goal-focused group intervention among sick-listed is cost effective focusing health related quality of live.
- Improving health and function is important but not sufficient to speed up return to work.

Work stress, migration background and risk of long-term sickness absence in Denmark

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Background:

Work stress may increase risk of long-term sickness absence, but little is known if this association differs by migration background. In this study, we examined the prospective association between effort-reward imbalance at work and risk of long-term sickness absence in individuals with and without migration background in the Danish workforce.

Methods:
We included 59,468 respondents from a nationwide survey on work and health, 3,226 with a migration background (immigrants or first generation descendants of immigrants) and 56,242 without a migration background. Effort-reward imbalance was assessed by self-report. Migration background and long-term sickness absence (spells ≥6 weeks) were assessed by national register data. Using Cox regression, we estimated the association between effort-reward imbalance and onset of long-term sickness absence during 12 months follow-up separately for participants with and without a migration background, adjusted for age, sex, education and previous long-term sickness absence.

Results:
The effort-reward imbalance score at baseline was similar for respondents with and without a migration background. The hazard ratio for long-term sickness absence during follow-up per 1 standard deviation increment in effort-reward imbalance at baseline was 1.26 (95% CI: 1.16-1.37) and 1.16 (95% CI: 1.13-1.20) for respondents with and without a migration background, respectively.

Conclusions:
Work stress, measured by effort-reward imbalance, is associated with an increased risk of long-term sickness absence in workers with and without a migration background in Denmark. Although the estimate was higher in workers with a migration background, confidence intervals overlapped indicating that associations were similar in both groups. The results suggest that prevention activities on effort-reward imbalance and long-term sickness absence should not be prioritized by migration background but should be offered to the whole workforce.

Key messages:

- Work stress, measured by effort-reward imbalance, is associated with an increased risk of long-term sickness absence in workers with and without a migration background in Denmark.
- The results suggest that prevention activities on effort-reward imbalance and long-term sickness absence activities should be offered to the whole workforce.

Socioeconomic differences in paid sickness allowances in Finland

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Background:
Receipt of sickness allowance (SA), which in the Finnish benefit system functions as compensation for loss of income due to over 10-days-long sickness absence, is more prevalent in lower socioeconomic groups. As SA is an earnings-related benefit and higher occupational classes have on average higher previous income, their share of SA expenditure must be higher than their share of SA days would suggest. However, the allocation of SA costs to different socioeconomic groups is not known. The aim of this study was to compare occupational classes in terms of their shares of total paid SA days and SA benefit costs.

Methods:
We used register data covering the total working-age (16-64) employed population of Finland at the end of 2016 (N = 2.2 million), with linked data on paid sickness allowances during 2017. Yearly accumulated sickness allowance days and allowance costs, paid by the Social Insurance Institution of Finland, were calculated for upper and lower non-manual employees, manual workers and self-employed persons.

Results:
Of the total yearly SA days of the employed population, 13% were paid to upper non-manual employees, 40% to lower non-manual employees, 37% to manual workers and 10% to the self-employed (the respective shares of these occupational classes of the employed population were 23%, 36%, 30% and 11 %). The average gross allowance was 77€ per day among upper non-manuals and between 54€ and 60€ in the other groups. Accordingly, upper non-manuals accounted for a larger share of the SA costs compared to their share of SA days: the proportions of costs were 16%, 39%, 36% and 9% in each occupational class, respectively.

Conclusions:
The results show that as the average amount of daily sickness allowance is distributed in an opposite manner compared to the prevalence and length of sickness allowance spells, socioeconomic differences in sickness allowance costs are smaller than differences in the prevalence of sickness allowance.

Key messages:

- Upper non-manual employees have a lower prevalence of sickness absence and shorter spells than other occupational groups.
- Because of higher earnings-related sickness allowance among upper non-manual employees, their share of sickness allowance costs is higher than their share of sickness allowance days.

Work participation trajectories in 1098748 Finns: determinants and the incidence of sickness absence

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Background:
Early exit from paid employment is a notable public health and societal challenge. Previous research has largely focused on the relationships among variables instead of the relationships among individuals with different work participation history. Person-oriented methods enable to identify latent groups of individuals who are likely to follow similar development in their work participation over time. We thus aimed to identify work participation trajectories during early and midlife careers and their social determinants. A further aim was to determine the cumulative incidence of sickness absence due to key diagnostic groups, mental disorders and musculoskeletal diseases within the trajectories.

Methods:
Young (25-38 years at baseline, n = 495663) and midlife (39-52 years at baseline, n = 603085) Finnish people, working in 2004, were followed up through 2013, with registers of the Social Insurance Institution, and the Statistics Finland. The registers provided data for the outcome (work participation) and its determinants and sickness absence. Latent class growth analysis was used to identify trajectories.

Results:
Three distinctive trajectories were identified: temporary exit, permanent exit, and continuously employed people. As compared to the other trajectories, those belonging to the permanent exit trajectory were more likely men, manual workers and had a lower income. The cumulative incidence of sickness absence due to mental disorders was highest in the permanent exit trajectory group. For musculoskeletal diseases, the cumulative incidence of sickness absence increased in the permanent exit trajectory mainly in the older age groups.

Conclusions:
Distinct group-based trajectories of early work exit can be identified in a representative cohort of initially employed people. Focusing on the determinants of premature exit and early intervention to tackle increasing sickness absence may promote work participation particularly in the most vulnerable groups.

Key messages:

- Distinct trajectories of premature exit from paid employment can be identified in a nationally representative cohort of initially employed people from Finland.
- Focusing on the determinants and reasons of premature long-term labor market exit may help promote work participation particularly in the most vulnerable groups.

Sickness absences among young employees in private and public sectors

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Background:

Mental health problems among young adults is a public health problem as well as increasing work incapacity in terms of sickness absence (SA) due to mental diagnoses in Sweden. SA levels among those working in the public sector tend to exceed those working in the private sector. Knowledge is however lacking on whether experiencing mental health problems in young years can contribute to the association. The aim was to examine the association between type of employment and sickness absence among women and men, also adjusting for previously experienced depression and anxiety as well as for familial factors.

Methods:

The study included data on 25,496 twins born in Sweden 1959-1990. Information on depression and anxiety as well as on type of employment was obtained from a web-based survey conducted in 2005. Twins were followed prospectively until 2013 through national register data on SA. Logistic regression analyses were run with adjustment for familial factors, such as common genetics and environmental factors related to the family. Odds ratios (OR) with 95% Confidence Intervals (CI) are presented.

Results:

Higher rates of SA in the public (59%) as compared to the private (50%) sector were observed among women. There were 29% and 30% of men in public and private sectors, respectively, that have had at least one SA spell during the follow-up. Preliminary results showed that working in the private sector was associated with a higher risk for future SA among women (OR 1.63, 95% CI 1.14-2.33) but not among men (OR 0.66, 95% CI 0.41-1.07). The results changed only slightly after adjusting for previous depression or anxiety as well as for familial factors.

Conclusions:

Higher rates of SA among women working in the public as compared to the private sector were not explained by previously experienced depression or anxiety disorders.

Key messages:

- Higher rates of SA were observed among women working in public as compared to private sector.
- Previously experienced depression and anxiety were of similar importance for future SA in both public and private sectors.

Organizational climate and work commitment as predictor of 10-year registered sickness absence

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Background:

Early identification of persons at risk for sickness absence offers an opportunity to put in place preventive measures in the future. The Work Stress Questionnaire (WSQ) is specifically designed to identify people at risk for sickness absence due to work-related stress. In this study we examine prospective associations between work-related stress as measured by the WSQ and registered sickness absence up till 10 years later among employed and self-employed women in the general population in Gothenburg.

Methods:

This is a survey-linkage study based on the 2004-05 wave of the Swedish "Population Study of Women in Gothenburg (PSWG)" and 10-year follow-up in the MiDAS sickness absence register. Participants registered as employed or self-employed were included (n = 396). Outcomes were number of sickness absence episodes during follow-up and sickness absence during each two-year time band of follow-up.

Results:

High perceived stress due to poor organizational climate, compared to low stress, gave an adjusted Incidence Risk Rate (IRR) of 1.99 [95% CI 1.19-3.34] for sickness absence episodes. Combining high perceived stress due to poor organizational climate with high perceived stress due to work commitment gave an IRR of 2.32 [95% CI 1.26-4.26]. Examining separate time periods, similar associations were found during years 5-6 and 7-8. Perceived low influence at work also gave increased odds for sickness absence, at both in the shorter term (1st-2nd year) and longer term (7th-8th year).

Conclusions:

The findings align with previous studies that WSQ may successfully identify women with elevated risk for future sickness absence, and adds that this is even true in a general population context and using a very long follow-up period. Nevertheless, the findings should preferably be confirmed using a larger sample to improve precision of the observed associations.

Key messages:

- The present study contribute with knowledge about screening instruments that may identify women in the general working population with elevated risk for sickness absence.
- The findings suggest that high perceived stress due to organizational climate, alone and in combination with high work commitment, as well as low influence at work, increase risk of sickness absence.

5.A. Place and other social determinants of health disparities

Rural primary care: a scoping review

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Background:

Access to primary care is unequally distributed. Especially in rural and remote areas access to primary care services is problematic. As many countries, large and small, recognize the challenge of providing accessible and good quality primary care and implement different strategies to address this challenge, there are opportunities for cross-national learning. The main aim of this report is to provide information on best practices and solutions to counter the risk of a primary care vacuum in rural and remote areas.

Methods:

In this scoping review of the literature on primary care in rural areas we made an inventory of evidence from research of the past 10 years. The research literature from January 2008 to June 2018 was captured through searches of the databases of Medline, Cochrane and EMBASE. In addition, we included relevant grey literature from within the WHO European region.

Results:

The following four groups of strategies have been identified and can be used to address rural primary care shortages:

- substituting roles within multidisciplinary primary care teams
- smart recruitment, retention and training strategies focused on staff in rural areas
- implementing technological innovations in information and communication
- as a short term solution: promoting the mobility of health care workers and patients

Conclusions:

The evidence base with regard to interventions to improve access to primary care in rural areas is narrow, lacking sufficient methodologically sound research, making definitive conclusions about their effectiveness impossible. Additionally, the available evidence is biased towards programmes targeting physicians. Nevertheless, the literature does offer indications of promising intervention types, and provides valuable recommendations for their implementation.

Key messages:

- Implementation of strategies should always be accompanied by systematic monitoring of outcomes.
- Interventions should include primary care workers other than physicians.

Assessment of the spatial accessibility to health professionals at French census block level

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Background:

The evaluation of geographical healthcare accessibility in residential areas provides crucial information to public policy. This work developed an improved indicator: the Index of Spatial Accessibility (ISA) to measure geographical healthcare accessibility at the smallest available infra-urban level, that is, the Îlot Regroupé pour des Indicateurs Statistiques.

Methods:

This study was carried out in the department of Nord, France. Healthcare professionals are geolocalized using postal addresses available on the French state health insurance website. ISA is derived from Enhanced Two-Step Floating Catchment Area (E2FCA) algorithm. We have constructed a catchment for each healthcare provider, by taking into account residential building centroids, car travel time as calculated by Google Maps and the edge effect. Principal Component Analyses (PCA) were used to build a composite ISA to describe the global accessibility of different kinds of health professionals.

Results:

We applied our method to studying geographical healthcare accessibility for pregnant women, by selecting three types of healthcare provider: general practitioners, gynecologists and midwives. A total of 3587 healthcare providers are potentially able to provide care for inhabitants of the department of Nord. On average there are 92 general practitioners, 22 midwives and 21 gynecologists per 100,000 residents. The composite ISA for the three types of healthcare provider is 39 per 100,000 residents.

Conclusions:

ISA is a multidimensional and improved measure, which combines the volume of services relative to population size with the proximity of services relative to the population's location, available at the smallest feasible geographical scale. It could guide policy makers towards highlighting critical areas in need of more healthcare providers, and these areas should be earmarked for further knowledge-based policy making.

Key messages:

- Indicator of healthcare access at fine spatial scale allows us to identify precisely critical areas where healthcare professionals need to be allocated.
- ISA is a multidimensional measure, which combines the volume of services relative to population size with the proximity of services relative to the population's location.

Levelling the Playing Fields: A Pilot Intervention

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Despite the benefits of outdoor free-play for children (physical activity, well-being, independent mobility), access to urban spaces for play is on the decline in many cities. As such, there are increasing calls from public health officials, city planners and childhood advocates in Canada to promote outdoor play in cities. Responding to these calls, our pilot intervention will examine whether creating urban play spaces through road closures around schools and in neighbourhoods can increase children's outdoor play, physical activity and social interaction among residents.

The year-long intervention will involve road closures in four Montreal (Canada) neighbourhoods with different socio-economic profiles. After a diagnostic portrait of each site, participatory planning will engage children aged 8-12 and youth aged 13-18 to help redesign their neighbourhood streets for better access and playability. Outdoor play will be measured using a ''playability index'' to determine if increased outdoor play is due to intervention changes. Children's physical activity, play and mobility patterns will be captured with GPS loggers and accelerometers, and play duration and location will be recorded through daily diaries. Questionnaires will be given to parents and children regarding changing behaviours and perceptions about outdoor play, risk/safety and independent mobility. While still in a pilot phase, this paper will present the intervention approach and outline how it promises to impact multiple components of urban life for children and adults (physical/mental health, safety, social interaction, environment/equity).

The intervention is innovative by engaging children and families in its design and development, and by involving schools, municipalities and residents in its implementation and assessment. This co-creation and development promises broad impacts on local social practices and policy development, results which may be transferable to other Canadian and international cities.

Key messages:

- Access to urban outdoor play is critical for children's well-being. Road closures can increase urban outdoor play, thereby contributing to physical and mental health and promoting social interaction.
- Child and youth participation in the planning and development of urban play spaces can increase their relevance and broaden their social, environmental, health and policy impacts.

Health care in Amazon communities for education and awareness about health in low resource settings

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Background:

Brazil has an extensive area and social differences. Indigenous peoples and other minorities still have great difficulty in accessing health. Although increase in the number of medical graduates, there has been a low number of professionals joining the jobs offered in the remote areas.

Objectives: The objective of this project is to sensitize health students to the importance of meeting the health demands of the populations in remote areas and low resource settings through practical experience in the care of the indigenous communities of the Amazon region supervised by teachers.

Results:

The Mandic Health Boat team consists of about 40 to 50 members: 8-10 physicians (epidemiologist, pediatrician, general practitioner, gynecology, dermatology and ophthalmology), nurses, dental surgeons, 16 medical graduates , 6 dentistry graduates, 1 dental technician and 1 optician. The trips are 10 days long and are organized in integration with the local population and the health district so that the tasks are integrated into the routines of health actions. To date, the project has already carried out two expeditions and another is scheduled in June 2019. In the last one, 1619 medical consultations were performed and 639 dental consultations were donated 574 glasses and performed 97 surgeries for pterygium excision.

Conclusions:

Through this program it was possible to put the academics in contact with the reality of the indigenous communities and to raise awareness of the difficulties of these original peoples. It was also possible to provide health education and medical and dental care, with spotlight to dental prostheses and glasses, that are particularly difficult to access because they require materials and equipment that are unavailable in the forest. This experience provides health to the original populations and favors the students' awareness to social problems, as well as being an innovative scenario for the learning process in the health area.

Key messages:

- This experience provides health to the original populations and favors the students' awareness to social problems, as well as being an innovative scenario for the learning process in the health area.
- The planning of the expeditions with the community leaderships and the local health authorities allow the integration of the actions realized through annual trips to the routines of the health care.

Income inequality in disability-free life expectancy in Denmark

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Background:

The state old-age pension in Denmark is adjusted in line with the projected increasing life expectancy without taking social inequality in health and life expectancy into account. The purpose of the study was to estimate income disparities in life expectancy and disability-free life expectancy (DFLE) at age 50.

Methods:

By linking nationwide register data on income and mortality each individual at any age was divided into equivalised disposable income quartiles and life tables were constructed for each quartile. Data from the Danish Survey of Health, Ageing and Retirement in Europe (SHARE) was linked to register data providing access to information on respondents equivalised disposable income. Finally, data from the life tables were combined with prevalence on activity limitations by income quartiles from SHARE to estimate DFLE by Sullivan's method. Differences in DFLE were investigated and decomposed into contributions from mortality and disability effects.

Results:

A clear social gradient was seen for life expectancy as well as DFLE. Thus, life expectancy at age 50 differed between the highest and lowest income quartile by 8.0 years for men and 5.0 years for women. The difference in DFLE was 11.8 and 10.3 years for men and women, respectively. For men the mortality effect from the decomposition contributed by 4.1 years to the difference of 11.8 years in DFLE and 3.9 years to the difference in expected years with disability of 3.8 years while the disability effect contributed by 7.7 years.

Conclusions:

The study quantifies social inequality in health in Denmark. Although income inequality in life expectancy and DFLE can partly be explained by loss of income due to chronic diseases, one would expect a welfare state to provide better financial security for citizens with health problems. Furthermore, the marked social disparity when approaching retirement age is questioning the fairness of implementing a pension scheme independently of socioeconomic position.

Key messages:

- Disability-free life expectancy differs between income quartiles by more than 10 years.
- Pension age follows the projected increasing life expectancy independently of socioeconomic position. This seems unfair.

Social networks as a public health tool - ''Non-smoking bars and restaurants''

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Issue/problem:

In Serbia, 34,7% of adults are smokers. Although Framework Convention of Tobacco Control was signed in 2005, there are measures still not applied. Implementation of the existing laws on tobacco control is inconsistent. Inadequate regulation is particularly related to catering objects - restaurants and cafes, which contributes to a general tolerance towards smoking. Although 84% of the population is aware of the harmful effects of second-hand smoking, complete smoking ban in restaurants and cafes is supported by only 19% and 14%, respectively.

Description of the practice:

The initial idea was to identify smoke-free catering objects, as well as those that properly obey current laws. This led to creation of a Facebook page with a map of such objects in Belgrade. Another goal was to raise awareness about the effects of second-hand smoking and encourage people to articulate their needs, but also to emphasize the significance of this topic to the media and other relevant parties.

Effects:

In two years, the page reached nearly 4000 organic followers. It is daily used for sharing news and study results and for discussing tobacco control related topics. Some posts reach up to twenty thousand Facebook users. The map includes over 100 strictly non-smoking catering locations. The page has been further publicized via popular internet portals, newspapers, TV channels, specialized magazines and foreign tourist guides.

Lessons:

The page has revealed the suppressed need of the majority to express the intolerance to second-hand smoke. Even though most catering owners are hesitant to declare smoke-free areas, fearing a negative business impact, others see the page as a good promotion channel. The initiative has also been recognized by different parties with an idea of future joint action.

Key messages:
- Social networks are a powerful tool to broadcast public health initiatives and encourage people to take actions.
- Social media communities have potential to create a persistent influence on stakeholders to lobby for new regulations.

5.B. Workshop: Bridging the health divide across the Mediterranean: an agenda for public health research and polic

Organised by: EUPHA, WFPHA, SFSP
Chair persons: Yves Charpak - SFSP, Bettina Borish - WFPHA
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Objectives:

Develop 3-4 areas for intensified collaboration

The Mediterranean region has a rich history and is home to some of the earliest civilisations. Today, the Mediterranean is often in the news as a result of tragic events and unrest including conflict and loss of lives at sea. Political meetings such as the South EU summit of Southern European leaders and the 5 + 5 EuroMed are useful events to highlight the priority policy issues of this region. Yet, health has rarely been at the forefront of the political agenda for the Mediterranean. The migrant crisis comes as a timely reminder that there exists a full continent on the other side of this sea and border countries from Africa, themselves in active processes of reform and change, should be seen as neighbours with whom the European public health community needs to collaborate.

The purpose of this workshop is to shine a light on the health divide across the Mediterranean, to highlight key epidemiological, health systems and global health governance issues of priority to the region.

It aims to stimulate an initial discussion for a public health research and policy focus on the Mediterranean region which could eventually lead to a call for action and a programme of activities at international level.

Our neighbours share with us several public health challenges, from financing of health systems, epidemiological transition toward NCD diseases, environment and life style risks, human resources for health challenges and migrant issues from other parts of the continent.

Marseille, as the conference location, provides a unique opportunity to debate and exchange with the three Maghreb countries facing the southern border of Europe.

Key messages:
- Maghreb health systems are in transition, all three rather different, but rather close to some European and EU health systems regarding financing, priorities, social and regional inequalities in access to health services, aging and NCD growth pressure. How can they become a part and contribute to the very active European Public Health analysis and benchmarks on optimizing health systems performance?
- Part of the health crisis regarding migrants in Europe is also an issue for health care systems in Maghreb countries. Are there ways to collaborate, to implement real collaborative and joint actions?
- Maghreb countries face a very specific crisis because of European policies of attracting health professionals: the brain drain is a significant issue, endangering the capacity of the Maghreb health systems. Do we foresee solutions to it?
- Maghreb countries face the same transition as Europe toward chronic diseases' increased burden due to global changes in lifestyles and exposure to globalized health risks, But also thanks to improved health care and longer life expectancies. Fighting an increase in some risk factors can only be global or regional, with joint actions in need of forgetting the presence of the sea. Chronic disease is also an issue for international organizations: for example, such discussion could bring the three WHO regional officers involved around the Mediterranean Sea closer.

The Health Divide across the Mediterranean Sea: Epidemiology, Health Systems & International Governance

Natasha Azzopardi-Muscat
EUPHA
Department of Health Services Management, Faculty of Health Sciences, WHO Collaborating Centre on Health Systems and Policies in Small States, University of Malta, Malta

On going transition in Maghreb Health Systems. Sustainability of tentative support from external partners (donors, EU and UN agencies)

Miloud Kaddar
Senior health economist, Algeria
Maghreb Network on Health Economics and Health Systems (RESSMA)

Maghreb health systems and European health systems: so different?

Guillaume Dedet
Organization for Economic Cooperation and Development (OECD)
SFSP economic prospective working group Steering committee at the French Migrant Office

Brain drain in human resources in Maghreb countries and the need for ethical code of conduct on this matter. Migrations issues' challenges in Maghreb Health systems

Belgacem Sabri
Former minister for migration and social integration, Tunisia
Maghreb Network on Health Economics and Health Systems

Needs for public health collaborations going far beyond health care systems to address majors health threat, increasing pressure from global life style and environment risks factors, collaboration in health promotion and education, advocacy

Djamel Zoughailech
Scientific Committee of the African Federation of Public Health, Algeria

Concluding observations and remarks

Josep Figueras
European Observatory on Health Systems and Policies

5.D. Workshop: Paving the path to the health systems of the future

Organised by: Chafea, EUPHA, DG Sante
Chairperson: Anne-Marie Yazbeck, Chafea
Contact: anne-marie.yazbeck@ec.europa.eu

Reforming health systems is a priority that is being addressed at local, regional, national and European level. Health system reforms are complex; they require political commitment, know-how, skills and sustained financial investments. The EU can provide support in various stages of such reforms: from initiation to design and to implementation. The session will describe the main EU tools for this, such as the European Semester, programmes that can offer technical assistance, as well as programmes that provide opportunities for financial support.

EU tools to support health system reforms
Loukianos Gatzoulis
DG SANTE

Technical support / twinning
Sonia Mueller
VIGOUR

Financing support
Dita Protopopová
Mental Healthcare reform project, Ministry of Health, Czech Republic

5.E. Skills building seminar: Making the elevator pitch work: how to convince a policymaker in less than 2 minutes

Organised by: EUPHA, EUPHAnxt
Chair persons: Dineke Zeegers Paget - EUPHA, Maaike Droogers - EUPHA
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Since a number of years, EUPHA, the European Public Health Conference and other associations, have been working hard to translate the evidence in a such a format that policymakers take notice. The work by WHO Europe on 'telling the public health narrative' or providing factsheets and infographics is an example. EUPHA has organised several skills building workshops on translation of evidence in the past years (e.g. 2018: You say tomatoe, I say tomato). The European Public Health Conference introduced the so-called pitch presentations (at Glasgow 2014), where researchers are asked to present their work in 5 minutes with maximum 5 slides (no animations), a way to learn to present key messages from research in just a few minutes.

But what should you do, if you meet your policymaker in the hallway or in an elevator? Can you present your work, including key messages, without slides? And in less than 2 minutes? You should be able to.

In this skills-building workshop, we will select a number of abstracts that have been accepted by the International Scientific Committee as posters and we will invite the presenting authors to this dare: present your work and key messages in less than 2 minutes. In order to see whether the policymaker is convinced, we are organising a small panel of policymakers and ask them to give their feedback. Are they interested? Do they remember the key message? And if all goes well, do you get an invitation to come back and present more of your work?

Key messages:

- Being able to present your key messages anywhere, anytime is needed.

Panelist
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5.F. Sexual life, sexual health and gender: connecting the dots

Does Sense make sense? Mixed methods study of a Dutch sexual health program

Rosa Joosten

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In the Netherlands, the Sense program addresses several key elements of sexual health for young people <25 year. This program offers free consultations at the PHS concerning STI, contraceptives, pregnancy or sexuality. The performance of this program has not been studied yet. This mixed methods study investigates facilitators and barriers of a Sense consultation from the perspective of clients and health care professionals (HCP) and investigates the outcome of the consultation at three points in time. Semi-structured interviews were conducted after consultation among 16 clients and 6 HCP. Questionnaires were collected directly after consultation and at 3, 6 and 12 months after consultation. Two cohorts were recruited; clients with STI consultation only and clients with questions related to sexuality, contraception and pregnancy (Sense consultation, SC). Satisfaction of the consultation and applicability of the given advice was measured. In the follow up presence of STI, pregnancy, sexual problem and contraceptive use was measured. A minority of the interviewed clients were familiar with Sense, highly valued the expertise of the HCP and the open atmosphere during the consultation. Reasons for visiting

Sense included expertise, more anonymity and feeling more comfortable than at the GP. The questionnaire after consultation was returned by 144 STI clients and 32 SC clients. Both type of consultation were highly valued and advice was easily applicable. The follow up cohort included 97 STI clients and 23 SC clients. Response rate of the 3- and 6 month-questionnaires was 61%. Results of the full one year follow-up are expected in September 2019. Study results provide evidence for a highly valued Sense program, by both clients and HCP. Sense is a platform to discuss STI, contraception and sexuality in an open atmosphere, though familiarity with Sense is low. A major conclusion is that an STI consultation provides the opportunity to address questions related to sexuality.

Key messages:

- The Sense program is highly valued by young people, and yet the program is not widely known among young people.
- There is need for more publicity to the program to enable more young people to use this program and to improve the sexual health care of young Dutch people.

Sexuality education in Europe – An assessment of the current state, challenges and good practice

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Background:

Comprehensive sexuality education is a crucial factor for protecting the health and well-being of children and young people. A recent assessment, conducted by the Federal Centre for Health Education and the International Planned Parenthood Federation European Network (IPPF EN), gives an up-to-date overview of the current status of sexuality education (SE) in schools in 25 European and Central Asian countries. It further provides information on challenges and good practice in this field.

Methods:

Pre-tested questionnaires were sent to representatives of governmental (Ministries of Health or Education) and nongovernmental organisations (IPPF member associations) in 25 countries in Europe and Central Asia. All representatives of the nongovernmental (25) and two-thirds of those in governmental organisations (16) responded. The questions were grouped under five themes related to SE: legal framework, status of implementation, barriers and opposition, youth-friendly sexual and reproductive health (SRH) services, and national data on adolescent SRH.

Results:

In 15 of the 25 countries surveyed, a legal framework exists (law/ policy/ strategy) which supports SE in schools. In 11 countries, SE is mandatory in schools, and in 10 countries SE clearly has a comprehensive character. In most countries, SE is integrated into broader teaching subjects, e.g. biology or life skills education. A lack of teacher training and of monitoring and evaluation of SE programmes has been identified in the majority of countries.

Conclusions:

In the past two decades, remarkable progress has been made in developing and implementing SE in the region. Nevertheless, further improvements are urgently needed, as differences between and within countries persist. These include the quality and the comprehensiveness of SE programmes, the monitoring and evaluation of these programmes and the development and implementation of teacher training.

Key messages:

- Remarkable progress has been made in implementing sexuality education in Europe and Central Asia.
- Nevertheless, further action is needed to reduce differences in implementation and quality between and within countries.

PrEP users among Lisbon MSM Cohort participants – A first look after PrEP implementation in Portugal

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Background:

Pre-exposure prophylaxis (PrEP) with tenofovir/emtricitabine has shown to be effective in preventing HIV among high-risk HIV-negative men who have sex with men (MSM). Portugal made PrEP available in February 2018, but few MSM reported PrEP use before. We aimed to compare the sociodemographic characteristics of MSM using PrEP and those knowing PrEP but not using and to compare MSM who started PrEP before and after its implementation in Portugal.

Methods:

We performed a cross-sectional analysis, using Lisbon MSM Cohort data - an open prospective cohort of HIV-negative MSM testing at a community-based center in Lisbon - regarding the first time PrEP use was reported. Data from March 2015 to April 2019 was used. In this period 2142 MSM participated in the cohort and reported to know PrEP of whom 160 (7.5%) reported to use it. 83 PrEP-users answered a subset of questions about PrEP. Comparisons were performed using t-test, Chi-square or Fisher's exact test.

Results:

Comparing with non-users, PrEP users were significantly older (Mean: 35.7, SD 9.4 vs. 30.8, SD 9.2, $p < 0.001$), had more frequently a Master or PhD degree (37.2% vs. 27.4%, $p = 0.017$), and were more frequently born in a foreign country (42.2% vs. 31.8%, $p < 0.001$). Groups were similar in terms sexual orientation. Among the 83 PrEP users answering more questions about PrEP, 28 (33.7%) reported to have ordered their PrEP medication online, 24 (28.9%) obtained it in a medical appointment in Portugal, 15 (18.1%) in a foreign country, 4 in a clinical trial or demonstration project. Of all PrEP users, 30 (19.4%) started PrEP only after February 2018, and no sociodemographic differences were found comparing with those who started before.

Conclusions:

MSM reporting PrEP use were more educated, older and more frequently born in a foreign country than non-PrEP users. MSM starting PrEP before and after February 2018 were similar, which may indicate that making PrEP available did not yet reach a more diverse group of MSM.

Key messages:

- MSM reporting PrEP use were more educated, older and more frequently born in a foreign country than non-PrEP users.
- MSM starting PrEP before and after February 2018 were similar, which may indicate that making PrEP available did not yet reach a more diverse group of MSM.

Prevalence of gonorrhea and chlamydia in a community clinic for Men who Have Sex with Men in Portugal

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Background:

Men who have sex with men (MSM) are at greater risk for sexually transmitted infections (STIs). Data on MSM chlamydia and gonorrhea prevalence estimates and associated risk factors is scarce. To our knowledge, this is the first study to describe the prevalence and the determinants of both chlamydia and gonorrhea infections in MSM in Portugal.

Methods:

We conducted a cross-sectional study using data from 1,832 visits to CheckpointLX, a community-based center for screening blood-borne viruses and other STIs in MSM.

Results:

Overall prevalence of chlamydia or gonorrhea in our sample was 16.05%, with 14.23% coinfection and 40.73% asymptomatic presentation among those testing positive. Anorectal infection was most common for chlamydia (67.26%), followed by urethral (24.78%) and oral (19.47%) infection. Oral infection was most common for gonorrhea (55.63%), followed by anal (51.25%) and urethral (17.50%) infection. In multivariate analyses, young age ($U = 94684$, $p = 0.014$), being foreign-born ($\chi 2 = 11.724$, $p = 0.003$), reporting STI symptoms ($\chi 2 = 5.316$, $p = 0.021$), inhaled drug use ($\chi 2 = 4.278$, $p = 0.039$) and having a higher number of concurrent ($\chi 2 = 18.769$, $p < 0.001$) or total ($\chi 2 = 5.988$, $p = 0.050$) sexual partners were each associated with higher rates of chlamydia or gonorrhea infection.

Conclusions:

Young and migrant MSM are a vulnerable population to STIs, as are those who use inhaled drugs and those with a higher number of concurrent or total sexual partners. Although Portugal has no guidelines on chlamydia and gonorrhea screening, our results point towards a need for greater awareness about the importance of high frequency screening for those at increased risk (i.e. every 3 to 6 months).

Key messages:

- Higher prevalence was found in young and migrant MSM, those with higher number of concurrent or total sexual partners, and those who use inhaled drugs.
- There is a need for greater awareness about the importance of high frequency STI screening for MSM at increased risk.

How to reach migrant transgender women in Paris? An example of collaborative sexual health action

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Issue:

In France, screening for HIV and sexually transmitted infections (STIs) is provided by free HIV and STIs screening centers called CeGIDD. Despite a complete combined prevention offer, the number of new HIV diagnosis has been stable for years. Transgender women have one of the highest HIV prevalence.

Description of the problem:

Transgender women are a hard to reach population with multifactorial barriers in their access to healthcare including fear of stigma, leading to late HIV diagnosis and untreated STIs. The CeGIDD of a university hospital in Paris aimed to reach this public working with two associations, creating a free, complete sexual health action outside the hospital in a safe environment.

Results:

The CeGIDD identified a Parisian association, PASTT, which accompanies transgender women, mainly migrants, in accessing healthcare and social rights. Its active file is around 1500 persons a year, mostly resorting to prostitution. Another association, AREMEDIA, pioneer in outreach interventions, was involved. The partnership allowed access to the public and to gather the funds for the intervention. It included counseling, screening, Pre Exposure Prophylaxis (PrEP), and took place once a week in PASTT facilities. Any participant could be referred to other physicians if they needed it, even if they lacked health insurance coverage. From September 2017 to November 2018, 212 persons attended the consultation and 26 received PrEP.

Lessons:

Working together with several associative partners presents many challenges, from the definition of the objectives to operational coordination. Overcoming these difficulties lead us to reach a new public with a high risk for STIs and HIV.

Key messages:

- Community based sexual health actions dedicated to transgender women are a successful way to reach this public.
- The safe environment provided by the association is a great opportunity to familiarize them with the medical staff and to empower them regarding healthcare.

Gender-specific health literacy of individuals with a migrant background: A mixed-method approach

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Background:

The project "Gender-specific health literacy in individuals with a migrant background (GLIM)" (German Federal Ministry of Education and Research; 01GL1723) aims to provide a comprehensive overview of international research and evidence on aspects of gender and migration related to health literacy. It encompasses primary and secondary research using a mixed-methods approach.

Methods:

In a first step, we systematically review the available quantitative and qualitative evidence: in the first quantitative review, we meta-analyse the evidence on gender differences in health literacy of migrants. The second quantitative review assesses the effectiveness of interventions for improving health literacy in female and male migrants. The third review summarises qualitative evidence to assess factors associated with gender and migration that may play a role in the design, delivery, and effectiveness of such interventions. In a second step, we conduct primary research by performing focus group discussions (FGDs) with health care providers who regularly work with different migrant groups in order to explore their perspectives on the challenges and needs of migrants in the German health care system.

Results:
To date, we identified 163 relevant references after screening of 17,932 references, for all reviews combined. Various health literacy interventions and measurement tools exist and require critical evaluation. The FGDs yielded hints to factors that a) influence gender differences in the health literacy of migrants (e.g. masculinity norms preventing Mediterranean men from consulting psychotherapists) or b) limit systemic health literacy (e.g. lack of translators).

Conclusions:
Results from the FGDs can provide insights into the processes underlying the results of the reviews. However, despite increasing research, summarising the available evidence is highly challenging, as there are no universal definitions of the key concepts health literacy and migrant background.

Key messages:

- This is an interdisciplinary project, combining quantitative and qualitative evidence to provide maximum value to health policy and decision-making for the health care and health literacy of migrants.
- Research on gender-, and migration-specific aspects of health literacy is of great importance for the development and delivery of effective interventions for improving migrants' health literacy.

5.G. Cardiovascular risk factors

Identifying patients at risk of readmission for heart failure in the French national claim database

Panayotis Constantinou

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Background:
To reduce readmissions for heart failure (HF) among HF patients, most at-risk individuals could be targeted to benefit from adapted interventions. A better understanding of HF readmission predictors could help clinicians and regulators identify patients most at-risk. We focused, in particular, on distinguishing HF severity from overall health-state severity.

Methods:
We studied predictors of HF readmission available in administrative data in a nationwide cohort of patients aged 65 years or older surviving an index hospitalization for HF in 2015 (N = 70 657). To take into account the competing mortality risk, we estimated subdistribution hazard ratios (sdHRs) of HF readmission and cause-specific hazard ratios (csHRs) for HF readmission and for death without HF readmission, over a 1-year follow-up period. We then computed cumulative incidences and daily rates of HF readmission for specific risk-groups.

Results:
31.8% of patients were readmitted at least once for HF, among which 27.2% (8.6% of study cohort) were readmitted 30 days after discharge. 17.6% of patients died without any HF readmission. HF severity and overall health-state severity were the strongest HF readmission predictors (sdHRs 2.66 [95% CI: 2.52-2.81] and 1.37 [1.30-1.45] respectively, when comparing extreme categories). HF severity and length of index stay were more strongly associated with the rate (csHRs) of HF readmissions, whereas overall health-state severity and age were more strongly associated with the competing rate of death without HF readmission. Risk-groups defined upon HF severity and overall health-state severity had approximately 40% of separation in HF readmission proportion (21.9% versus 60.4%).

Conclusions:
Our results stress the importance of considering both HF severity and overall morbidity and of accounting for the competing mortality risk to identify patients at-risk of HF readmission. Such patients could benefit from targeted transitional or post-discharge HF care.

Key messages:

- Heart failure patients can be stratified into risk-groups of readmission using administrative data.
- Identifying at-risk patients could help clinicians and regulators to target interventions.

Role of nurses to improve self-care in heart failure patients: a systematic review and meta-analysis

Azzurra Massimi

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Introduction:
Heart Failure (HF) is a pandemic chronic disease with a prevalence up to 3% in the general population, representing the main cause of hospitalization for people over 65. Self-care plays a central role in the management of patients with HF, showing evidence of effectiveness in reducing re-hospitalization rates and mortality.

Methods:
We carried out a systematic review and meta-analysis to assess the efficacy of nurse-led educational interventions Vs usual care in improving self-care skills of patients with chronic HF. The main biomedical databases were searched for Randomized Control Trials (RCTs) of nurse-led educational interventions performed on adults with a previous diagnosis of HF. Improvement of HF self-management skills (self-care level) was summarized by calculating the standardized mean difference (SMD) and 95% confidence intervals (CI) stratified for the length of the follow-up.

Results:
Globally, 14 RCTs were included involving 2078 participants. Ten studies showed the efficacy of the interventions at 3 months (short term) with a SMD of 0.78 (95% CI 0.38-1.18) in favor of the self-care education interventions. Five studies reported on self-care abilities at 6-9 months (medium term), not showing statistically significant results (SMD 0.35, 95%CI 0.11-0.81). The long-term effect of the educational interventions showed no statistically significant improvement in self-care behaviors (three studies, SMD 0.05, 95CI% 0.12 - 0.22).

Conclusions:
These results show that nursing educational interventions improve self-care behaviors in HF, but mainly in the short term. Intensive educational interventions led by nurses, associated with appropriate continuity and transition of care, can determine the best outcomes for patients with HF, strengthening self-care behaviors over time. This approach could have a major impact not only on individual level, but on the general reduction of complications, hospitalization, medical costs and ultimately mortality.

Key messages:

- Nurse-led educational programs have a short-term efficacy in enhancing self-care behaviors among heart failure patients.

- Post-discharge repeated educational interventions, along with timely and shared plans ruling the transition between the hospital and the other providers, are strongly needed.

Cardiovascular disease risk factors of military: A comparative assessment with civilians

Bienvenu Bongue

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Background:

Cardiovascular diseases are the leading cause of death in the world. Military population that seemed immune to these pathologies is now as exposed as the general population. The effective response to this public health problem first requires the identification of the level of exposure of populations. Thus, the objective of our study was to determine the prevalence of Cardiovascular Disease (CVD) risk factors of the Cameroonian military population compared to civilians.

Methods:

We conducted a cross-sectional study. It involved subjects aged 18 to 58 years, recruited from October 30, 2017 to November 13, 2018 at the Fifth Military Sector Health Center. Five cardiovascular risk factors were assessed, smoking, harmful alcohol consumption, obesity/overweight, hypertension and diabetes. The STEPwise model proposed by the World Health Organization (WHO) was used to estimate the risk of cardiovascular diseases. Mann Whitney and Fisher exact tests were used for statistics comparison.

Results:

The study included 489 subjects, 270 military personnel and 219 civilians. The median age of the two populations was not significantly different (30 years versus 33 years, p = 0.6939). The proportion of smokers was higher in the military (12.59% versus 9%, p = 0.0011). Alcoholism was also higher in the military population (60.74% versus 13.24%, p = 0.0000). Similarly, military personnel were more obese than civilians (58.15% versus 40.18%, p = 0.0000). Distribution of hypertension and diabetes was not significantly different between military and civilians (18.15% versus 16.89%, p = 0.8113) and (1.48% versus 3.20%, p = 0.2321) respectively. The proportion of subjects with a high cardiovascular risk was higher in the military (14.81% versus 7.76%, p = 0.0162).

Conclusions:

CVD risk factors are more prevalent in Cameroonian military population than in civilians. This result suggests that, in addition to national preventive campaigns, special attention is needed for military population in Cameroon.

Key messages:

- Cardiovascular disease risk factors are more prevalent in Cameroonian military population than in general population.
- in addition to national preventive campaigns, special attention is needed for military population in Cameroon.

Cardiovascular hospitalisation before and during the financial crisis among occupations in Taiwan

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Background:

Cardiovascular diseases (CVD) were related to financial stress. Little was known about the effects of financial crisis on cardiovascular health by occupations. This study examined CVD hospitalisations before and during the 2008 financial crisis among five occupational groups in Taiwan.

Methods:

Data were collected from the Taiwan Survey on Hypertension, Hyperglycemia and Hyperlipidaemia 2007, including 4,673 participants aged 20 and above, categorized into five types of occupations, i.e., professional & manager (PM), office clerk & administrative staff (OA), skilled work (SW), unskilled worker (UW) and non-worker (NW). We abstracted their CVD hospitalisation records in the three years before (September 2005 to August 2008) and during the 2008 financial crisis (September 2008 to August 2011) from the National Health Insurance Research Database. Using incidence rate ratios (IRRs), we compared CVD hospitalisation of the first, second, third year from September 2008 to the three-year average before September 2008 for five occupational groups. Random effect negative binomial models were performed to estimate IRRs.

Results:

After adjusting for covariates including age, sex, education, smoking, alcohol drinking, exercise and body mass index, there was an increase of CVD hospitalisation incidence for NW in the first year of the financial crisis (IRR = 1.46, 95% Confidence Interval [95% CI] = 1.19-1.77); in the second year, SW had a raised risk of CVD hospitalisation (IRR = 2.71, 95% CI = 1.59-4.60). For all occupational groups, the incidence rates of CVD hospitalisation reached the peak in the third year (PM: IRR = 2.68, 95% CI = 1.05-6.83; OA: IRR = 2.70, 95% CI = 1.18-6.19; SW: IRR = 5.13, 95% CI = 2.89-9.09; UW: IRR = 2.12, 95% CI = 1.02-4.41; NW: IRR = 1.85, 95% CI = 1.18-2.67).

Conclusions:

CVD hospitalisation of all occupations were affected by the financial crisis; when non-workers were the early victims, skilled workers may be the most vulnerable in the 2008 financial crisis.

Key messages:

- This study investigated the effects of the 2008 financial crisis on cardiovascular disease hospitalization by five occupational types in Taiwan.
- All occupations, particularly skilled workers, were affected by the financial crisis.

Socioeconomic Inequalities in Cardiovascular Risk Factors in Turkey, 2008-2016

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Background:

This study aims to investigate the magnitude of occupational class (OC) and educational inequalities in cardiovascular risk factors in Turkey from 2008 to 2016.

Methods:

We used the Turkey Health Survey, a bi-annual health interview survey among a representative sample of the Turkish population. We calculated the age-standardized prevalence of four cardiovascular risk factors (obesity, overweight, hypertension, diabetes and smoking) by OC and education, and summarized inequalities with the Relative Index of Inequality (RII) and Slope Index of Inequality (SII). To determine whether the RII/SII changed over time we estimated a regression model with an interaction term between survey year and OC/education.

Results:

We found different patterns for men and women. Among men, smoking was the only risk factor with a higher prevalence in both lower OC and education groups (RII = 1.18 (95% CI: 1.08-1.28) and 1.40 (1.26-1.55), respectively). Obesity, overweight and diabetes was higher among higher OC (e.g., for overweight RII = 0.83, 95% CI 0.76-0.90) whereas obesity was higher among lower educated (RII = 1.32, (95% CI: 1.08-1.61)) and no inequalities were found for hypertension by socioeconomic status. However, among women, all risk factors except smoking had a higher prevalence in lower OC and education groups (e.g., for overweight RII = 1.14 (1.06-1.24) and 2.98 (2.71-3.29), respectively), whereas for smoking we found a higher prevalence in higher socioeconomic groups (RII for OC = 0.77 (95% CI: 0.65-0.90 and for education = 0.36 (0.29-0.44)). Significant interactions with survey year were only found in a few cases, mainly pointing to emergence or widening of inequalities to the disadvantage of lower socioeconomic groups.

Conclusions:

Inequalities in cardiovascular risk factors are less systematic in Turkey than in most high-income countries, but if current trends continue similar inequalities will emerge in the near future.

Key messages:

- In Turkey, in men obesity, overweight and diabetes are concentrated among higher occupational classes, obesity is concentrated among lower education groups and lower socioeconomic groups smoke more.
- In Turkey, in women obesity, overweight, hypertension and diabetes are concentrated among lower socioeconomic groups however higher socioeconomic groups smoke more.

Risk of cardiovascular diseases after breast cancer: an analysis on a cohort of 1.3 million women

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Background:

Breast cancer (BC) is the malignant tumor with the highest incidence in women in the world with an estimate of about 500,000 new cases per year in Europe. Guidelines for BC treatment include surgery followed by radiotherapy, hormonal therapy or chemotherapy. Several studies showed that BC treatment increases the risk of myocardial infarction (MI) while only few studies investigated the risk of stroke after BC. The aim of the present study was to assess the risk of MI and stroke in BC survivors, taking into account the possible influence of treatments.

Methods:

Women included in the study are part of a longitudinal cohort including all residents in the Piedmont region linked to the 2011 census data and followed-up through administrative data on mortality, hospital admissions, drug prescriptions, and outpatient consultations. Validated algorithms to identify BC incident cases and their therapies as well as to identify MI and stroke were applied.

The effect of BC on the risk of MI and stroke was tested using Cox models (adjusted for confounding variables) that allow to account for the competing risks. First, BC patients were compared to healthy women, then BC women that undertwent a specific therapy were compared with both healthy women and other BC patients.

Results:

Women with BC showed an increased risk compared to healthy women for both MI (HR: 1.20; 95% CI: 1.05-1.38) and stroke (HR: 1.58; 95%CI: 1.38-1.82). Chemotherapy almost doubled the risk of MI, while radiotherapy did not seem to have a similar effect, even comparing with other BC patients. The high risk of stroke observed comparing BC (any therapy) with healthy women disappeared when comparing specific therapies among BC patients.

Conclusions:

Chemotherapy increased the risk of MI in BC patients, while recent radiotherapy strategies had less impact, if any. Moreover, the mechanism for which BC patients have an increased risk of stroke seems not to be related to a late effect of therapies.

Key messages:

- Breast cancer women are at higher risk of developing cardio and cerebrovascular diseases and this should be taken into account when planning therapies and follow-up surveillance.
- Despite the increase in quality of the therapeutic approaches for breast cancer patients, chemotherapy increases the risk of myocardial infarction, while radiotherapy dangerousness recently decreased.

Long working hours and mortality in Central and Eastern Europe: the HAPIEE study

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Background:

Long working hours are common in countries of Central and Eastern Europe (CEE). A wide range of epidemiological studies have showed that long working hours had an adverse effect on health but the evidence mostly comes from Western Europe, East Asia and North America. This study aimed to assess the relationship between long working hours and the risk of mortality in employed people in three Eastern European countries.

Methods:

Participants, aged 45-69 years at baseline, were from the Health, Alcohol and Psychosocial Indicators in Eastern Europe (HAPIEE) cohort study conducted in Russia, Poland and the Czech Republic. Baseline survey included a structured questionnaire and examination in the clinic during 2002-2005. Working hours were assessed by a self-reported questionnaire at baseline. Participants have been followed-up for all-cause mortality and cause-specific mortality for an average of 11 years. Impact of long working hours on mortality was analysed by Cox proportional hazards regression. In all-cause mortality analysis, a total of 10878 men and women were included, and 10399 participants were included in cause-specific mortality analysis.

Results:

During the follow-up, there were 1187 deaths from all causes, 288 from CVD, and 251 from cancer. Those who worked 61 hours or more in a week showed higher risk of mortality compared to those working 36-45 hours per week: HR 1.32 (95%CI 1.01 to 1.74) for all-cause mortality and 1.73 (95% CI 1.03-2.93) for CVD mortality. There was no significant increase in risk of cancer mortality associated with working long hours. There was no significant association between working 46-60 hours a week and risk of mortality, including all-cause mortality and cause-specific mortality.

Conclusions:

The risk of all-cause and CVD mortality in three CEE was significantly higher among employees working extensive hours. These findings suggest that more attention should be paid to shortening working hours for those who work extensively.

Key messages:

- Long working hours increase risk of all cause and CVD mortality.

- Cancer mortality is not related to long working hours.

The Role of Niacin in Cardiovascular Disease Prevention: A Systematic Review and Meta-analysis

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Background:

Niacin remains a therapeutic option for patients with cardiovascular disease, but recent studies have called into question the effectiveness of other HDL-C-raising drugs. We evaluated the evidence supporting current FDA-approved uses of niacin in cardiovascular prevention settings.

Methods:

The systematic review included clinical trials involving niacin as a treatment for cardiovascular disease. The meta-analysis included randomized clinical trials reporting niacin's effect on at least one long-term outcome: cardiovascular disease, coronary heart disease mortality, acute coronary syndrome, stroke, revascularization, major adverse cardiac events (MACE). Databases were searched up to October 2017. Study-level data were extracted and inverse-variance weighted methods were used to produce pooled risk ratios using random-effects models for between-study heterogeneity. Meta-regression analysis was used to assess the association between change in HDL-C and the log risk ratio of the pooled results.

Results:

Out of 119 clinical trials, 17 documented niacin's effect on at least one cardiovascular disease outcome. The meta-analysis covered 35,760 patients with history of cardiovascular disease or dyslipidemia. Cumulative evidence found no preventive effect of niacin on cardiovascular outcomes in secondary prevention. Stratified meta-analysis showed an association between niacin monotherapy and reduction of some cardiovascular events (acute coronary events, RR 0.74, 95%CI 0.58-0.96; stroke, RR 0.74, 95%CI 0.59-0.94; revascularization, RR 0.51, 95%CI 0.37-0.72). These results were mainly driven by two trials conducted in the 1970s and 1980s.

Conclusions:

Niacin might have some use in lipid control for secondary prevention as monotherapy, perhaps in patients intolerant to statins, but evidence is from older studies on a population potentially not representative of current-day patients.

Key messages:

- Niacin might have some use for cardiovascular secondary prevention in patients intolerant to statins, but evidence is from older studies on a population not representative of current-day patients.
- The FDA has to review the approved indications for Niacin in cardiovascular secondary prevention.

5.H. Workshop: Transferring innovation in health systems: The role of national mirror groups

Organised by: TO REACH Consortium, EUPHA
Chair persons: Natasha Azzopardi Muscat - EUPHA, Karine Chevreul - France
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To-Reach has the aim to build and push forward a strategic agenda at European level for health services and policy research into practice in order to help decision makers in identifying and understanding the value of a given innovation in the field, the potential for joint development of innovation and facilitating implementation to fit the regional/local contexts.

Given the diversity of health systems in Europe and the element of subsidiarity within the European Treaty, in order, to achieve this aim the commitment of all categories of stakeholders (funding bodies, researchers, policy makers, systems managers...) at national level is as essential prerequisite for success.

France has created a mirror group to consult these stakeholders to ensure that national priorities will be reflected at European level and respectively that national priorities and funding direction are influenced by the European strategic agenda. The objectives of this workshop will be to learn from the French experience and to discuss how similar experiences in other countries could be shared and promoted. Their role going forward in the project and their contribution to the expected outcomes will be the focus of this workshop. Stakeholders from a number of European countries will be invited to present and discuss their perspective on this issue.

Key messages:

- Joint development of health services research at European level is necessary to overcome key system challenges.
- National stakeholders are key to the development of a European health services research progarmme.

The need for a transformation health systems research programme in Europe

Walter Ricciardi

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Over the last decades, European health systems have faced growing common challenges: ageing related issues and continuous financial pressures call for innovative solutions on how to organise health care in an equitable and efficient manner. To address this situation there is an urgent need to bring in innovation and research evidence, in order to identify and implement more effective and sustainable ways to organise, manage, finance, and deliver high quality care to all European citizens. TO-REACH has been working to develop a Strategic Research Agenda which has the ambition to address the increasing challenges faced by health systems, directed to those policy areas relevant in the coming years. This living document will help preparing an European research programme that will maximise value of research public investment in this field by helping avoid duplication and failed implementation while ensuring systematic prioritisation of research areas that face greatest changes and highest need.

Learning between European health systems: the nature of the challenge

Nick Fahy

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Given their shared values and challenges, European health systems should be able to learn from each other about what works best. In practice, though, turning good practice in one place into more universal practice is stubbornly difficult even within single health systems, and has proved particularly challenging between European health systems. This session will explore the nature of the challenge to implementing innovation; the nature of what implementing innovation involves, why it proves to be so challenging in practice, and the particular challenges of learning between countries, and outline what can be done in research, policy and practice to help learning across European health systems more effectively in future.

The achievements of the ToREACH project and next steps

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Putting in practice the Strategic Research Agenda of TO REACH within a European platform for learning and collaboration requires the engagement with a wide range of stakeholders both at national and European level. The TO-REACH project is itself a first step towards establishing such a partnership and cooperation approach, involving policy-makers, funders, researchers and other stakeholders from across the European Union. A shared European approach to health services and policy research will contribute to addressing the challenges described in the previous presentations by putting in place the governance and framework conditions needed to support the necessary research across the region and beyond.

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5.I. Skills building seminar: How to improve vaccination coverage in the European Union?

Organised by: EC, Observatory
Chair persons: Josep Figueras - European Observatory, Isabel de La Mata - European Commission - DG Sante
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In recent years, the European Union (EU) has been facing several serious outbreaks of vaccine-preventable diseases, including measles. Vaccination coverage rates for the first dose of the vaccine against measles vary from 85% in Italy to 99% in Luxembourg and Hungary, with the average for the EU (93.6%) falling below what is required to ensure herd immunity. Similar variations can be seen for other vaccinations, including influenza immunization programmes targeting older adults who are at greater risk of severe complications. Of particular concern is that in a number of EU countries anti-vaccine groups, aided by social and mainstream media, and sometimes populist politicians, are gaining traction and have started to influence public and health worker attitudes towards the safety and effectiveness of vaccinations.

The EU has started to respond to these developments in a number of ways. In his 2017 State of the Union address, Jean-Claude Juncker, the President of the European Commission, has called for action to increase vaccination coverage and to ensure that everyone in the EU has access to vaccines. This was followed by a number of new policy and research activities initiated by the European Commission.

The workshop provides an overview of some of these activities. It starts with an introductory presentation on recent initiatives of the European Commission to support national vaccination efforts. This is followed by a presentation on the work of the Expert Panel on effective ways of investing in Health and their report on vaccination programmes and health systems in EU countries. A third presentation presents EU-funded research on vaccine hesitancy in EU member states, based on the largest ever study on attitudes to vaccines and vaccination in the EU. A final presentation explores a study undertaken for the European Commission by the European Observatory on Health Systems and Policies on the organization and delivery of vaccination programmes in EU member states, based on detailed country fiches.

The workshop will provide opportunity for the audience to comment on and discuss presentations and to consider current policy options in Europe to address vaccine hesitancy and improve vaccination coverage through health system interventions. It will be of interest to public health researchers, practitioners and policy-makers from across Europe.

Key messages:

- The workshop provides a forum for discussing European initiatives to overcome vaccine hesitancy and improve vaccination coverage.
- It explores policy options at the European and national level.

Recent European Union (EU) initiatives to support national vaccination efforts

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Background:

Vaccination is the main tool for primary prevention of disease and one of the most cost-effective public health measures available. Immunisation through vaccination is the best defence we have against serious, preventable, and sometimes deadly, contagious diseases. Thanks to widespread vaccination, smallpox has been eradicated, Europe made polio-free, and many other diseases almost eliminated.

Methods:

This presentation provides an overview of recent European Union (EU) initiatives to support national vaccination efforts.

Results:

The EU has launched a number of initiatives to strengthen national vaccination efforts. In December 2018 the European Council adopted a Recommendation to strengthen the EU cooperation on vaccine-preventable diseases. The initiative aims to tackle vaccine hesitancy, improve coordination on vaccine procurement, support research and innovation, and strengthen EU cooperation on vaccine-preventable diseases. EU countries are encouraged to develop and implement national vaccination plans with initiatives to improve coverage, and to introduce routine vaccination status checks.

The European Commission is also reinforcing its support to national vaccination efforts to increase coverage, including through the preparation of a Joint Action on vaccination co-funded by the Health Programme. Launching in 2018, the Joint Action will address vaccine hesitancy and seek to increase vaccination coverage in the EU. It is coordinated by INSERM (France) and involves 23 countries (among them 20 EU countries).

Conclusions:

Vaccination policy is a competence of national authorities, but the European Commission assists EU countries in coordinating their policies and programmes.

Vaccination programmes and health systems in the European Union. Report of the Expert Panel on effective ways of investing in Health

Martin McKee

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Background:

Vaccination is one of the most cost-effective public health interventions available and the main tool for primary prevention of communicable diseases. However, the EU is facing increasing outbreaks of vaccine preventable diseases, while some fatal cases of measles and diphtheria have been reported.

Methods:

The presented report is based on the work of the Expert Panel on effective ways of investing in Health, which was informed by a literature review on the main factors (enablers and obstacles) influencing vaccination uptake.

Results:

Obstacles to vaccination coverage include individuals' and parents' concerns or fears about vaccine safety and side effects, lack of trust, social norms, exposure to rumours and myths undermining confidence in vaccines, failure by some healthcare providers to counter these myths and provide evidence-informed advice, access barriers (e.g. poor availability, co-payments), and failure to understand the underlying mechanisms that decrease vaccination confidence. Enablers include sources of reliable information about vaccination, exposure to positive media messages, building trust in institutions and providers, building confidence in vaccination, easy access and availability to healthcare services, ease of administration, active involvement and engagement by healthcare providers, and targeting of high-risk groups.

Conclusions:

There is a range of policy options that countries can implement to increase vaccination coverage. Communication strategies about the benefits of vaccination are important but need to be combined with opportunities for dialogue with vaccine hesitant groups and participatory approaches. These strategies need to be targeted not only at the uninformed (i.e. the lack of information) but also at the misinformed (when the information is incorrect) or disinformed (when information is spread with the intention to deceive).

State of vaccine confidence in the European Union in 2018

Emilie Karafillakis

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Background:

High confidence in vaccination programmes is crucial for maintaining high coverage rates. Across the European Union (EU), however, vaccine delays and refusals are contributing to declining immunisation rates in a number of countries and are leading to increases in disease outbreaks.

Methods:

We assessed the overall state of confidence in vaccines among the public in all 28 EU member states and among general practitioners (GP) in ten EU member states, conducting the largest ever study on attitudes to vaccines and vaccination in the EU, eliciting the views of approximately 28,000 respondents across the 28 EU member states.

Results:

We found that a number of member states (including France, Greece, Italy, and Slovenia) have become more confident in the safety of vaccines since 2015, but that the Czech Republic, Finland, Poland, and Sweden have become less confident. While GPs generally hold higher levels of vaccine confidence than the public, the survey found that 36% of GPs surveyed in Czech Republic and 25% in Slovakia do not agree that the MMR vaccine is safe and 29% and 19% respectively do not believe it is important. Countries whose GPs hold higher confidence in vaccines tend to have a larger proportion of the public expressing positive vaccination beliefs.

Conclusions:

Even countries with well-established vaccination programmes and high levels of confidence are not immune to rising vaccine hesitancy. There is a need for continuous monitoring, preparedness and response plans to maintain and increase confidence in the importance, effectiveness and safety of vaccines, among both the public and health professionals.

The organization and delivery of vaccination services in the European Union

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Background:

The design and operation of health systems can influence vaccine uptake, including through the way that vaccination programmes are governed, financed and delivered. This study examined the organization and delivery of vaccination programmes in the 28 EU member states and key barriers and facilitators to improved vaccination coverage.

Methods:

We undertook an umbrella review of systematic reviews on health system related factors influencing vaccine uptake and commissioned country fiches that describe the organization and delivery of vaccination programmes in each of the EU member states, followed by a comparative analysis. The focus was on measles vaccination for children and seasonal influenza vaccination for adults.

Results:

In all countries covered, there is a dedicated agency in charge of developing and overseeing implementation of national vaccination plans and programmes. In 9 EU member states (Bulgaria, Croatia, Czech Republic, France, Hungary, Italy, Poland, Slovakia and Slovenia), vaccinations against measles are mandatory for children, while in the remaining 19 countries they are voluntary, but recommended by the relevant authorities. However, the distinction between voluntary and mandatory immunization is not always clear-cut. In contrast, vaccinations for adults against influenza are voluntary in almost all EU member states, with the exception of Slovakia. Vaccinations are provided in most countries through primary care physicians or nurses.

Conclusions:

There are many actions that health systems can take to improve vaccination coverage. These include a mix of incentives and sanctions, targeted measures and outreach services for vulnerable population groups, and an expansion of public financing for vaccinations against influenza, as well as the removal of administrative barriers.

Vaccination coverage in the European Union

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Background:

Vaccination coverage rates in the European Union (EU) vary considerably across countries and there has been a decline for some diseases in some countries in recent years.

Methods:

The ECDC supports member states in their vaccination programmes through a range of activities, including identification of threats, surveillance, international collaboration, scientific working groups, assessments of national vaccination programmes, and communication activities.

Results:

For the first dose of the vaccine against measles, coverage ranges from 85% in Italy to 99% in Luxembourg and Hungary, with the average for the EU (93.6%) falling below what is required to ensure herd immunity. Uptake of the second dose against measles reached the target of 95% in only four countries in 2017, compared to 14 in 2007.

Conclusions:

Despite the fact that there are safe and efficient vaccines, there seems to be a crisis of confidence in them. Each EU citizen should receive correct evidence-based information on vaccines and have the same immunisation opportunities.

5.K. Skills building seminar: Measuring children mental health

Organised by: EUPHA (PMH)
Chair persons: Viviane Kovess-Masfety - France, Kerry Keyes - USA
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This workshop will be a skills building seminar aimed to present different instruments that have been used in measuring children or adolescents mental health, plus some results to illustrate their pertinence.

It aims to render child psychiatric epidemiology accessible by presenting easy to use instruments for children and adolescents that allow to conduct surveys in schools or in other contexts. It will also present and discuss some results in order to stimulate the epidemiological approaches for child mental health problems as well as evaluating access to care,specialized and no specialized, and the relationships between school achievements and mental health problems.

This will be based on two major studies:

1. The School Children Mental Health Europe, an EU funded project designed to set up a kit of instruments enabling cross EU comparisons. For this project a literature review allows to select the SDQ (Strengths and Difficulties questionnaire) to be administered to the parents and teachers and the Dominic Interactive, a sort of video game designed to evaluate DSM more commune diagnoses since the children were primary school children 6 to 11 years old.
2. Previously done in France, the project has collected around 1000 children per country in Germany, Italy, Netherlands, Lithuania, Bulgaria, Romania and Turkey. In addition it measured parental attitudes, domestic accidents, some physical diseases, parental mental health, access to care for mental health problems and some socio demographics. Teachers are asked to evaluate school achievements in addition to their own child mental health evaluation.
3. The project allows evaluating relative concordance on the above instruments results with clinical judgments on separate clinical samples from each of the countries using the DAWBA (a clinical instrument).
4. The lecture proposes to present the instruments and their usage and some of the comparative results among them the relationships between academic performances and mental health problems.
5. The US National Comorbidity Survey Adolescent Supplement ($N = 6256$), in that survey the Composite International Diagnostic Interview (CIDI) assessed fifteen lifetime mental disorders and The Sheehan disability scale assessed disorder severity. ID was defined as: 1) $IQ \leq 76$, measured using the Kaufman Brief Intelligence Test; and 2) an adaptive behavior score ≤ 76, measured using a validated scale.

The lecture will present the instruments and some of the results concerning psychiatric comorbidity and intellectual disability.

Key messages:

- Children mental health problems are affecting around 12% of the children and should be evaluated and monitored.
- Easy to use instruments exist; as children could be surveyed in schools it becomes relatively easy and not too costly to conduct surveys that will integrate risk factors and access to care.

Comparing children mental health across countries: challenges and results

Viviane Kovess-Masfety

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Background:

The School Children Mental Health Europe was a EU funded project designed to set up a kit of instruments enabling cross EU comparisons.

Methods:

A literature review allows to select the SDQ (Strengths and Difficulties questionnaire) to be administered to the parents and teachers after a validation process in each country and the Dominic Interactive (DI), a sort of video game designed to evaluate DSM more commune diagnoses on children 6 to 11 years old.

Results:

Data were collected on 7682 children randomly selected in a two stages selection: schools by country and children within the schools for whom 1) either parent- or teacher SDQ were completed: Overall, 12.8 % of children have any probable disorder with significant inter-country differences, 8.4 % probable conduct disorder, and 2.0 % probable hyperactivity/inattention. Adjusting for socio-demographic variables and parental psychological distress, country of residence did not predict the odds of having any disorder. 2) Overall, 22.0% of children were identified per their own evaluation as having at least one mental disorder, ranging from 16.4% in the Netherlands to 27.9% in Bulgaria. The prevalence of internalizing disorders was 18.4% across countries and ranged from 11.8% in the Netherlands to 24.3% in Turkey. The prevalence of externalizing disorders was lower with an average of 7.8%, ranging from 3.5% in Turkey to 10.5% in Bulgaria. Combining samples across European countries, 1 in 5 children reported internalizing problems and 1 in 12 children externalizing problems.

Conclusions:

This lecture aims to present and discuss child mental health measure instruments from different informants perspectives, comparisons across countries and the challenges for interpreting the differences.

Academic performance in mathematics and reading and self-reported mental health problems in children across Europe

Mathilde Husky

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Background:

The School Children Mental Health Europe was a EU funded project designed to set up a kit of instruments enabling cross EU comparisons.

Methods:

A literature review allows to select the SDQ (Strengths and Difficulties questionnaire) to be administered to the parents and teachers after a validation process in each country and the Dominic Interactive (DI), a sort of video game designed to evaluate DSM more commune diagnoses on children 6 to 11 years old.

Results:

Data were collected on 7682 children randomly selected in a two stages selection: schools by country and children within the schools for whom 1) either parent- or teacher SDQ were completed: Overall, 12.8 % of children have any probable disorder with significant inter-country differences, 8.4 % probable conduct disorder, and 2.0 % probable hyperactivity/inattention. Adjusting for socio-demographic variables and parental psychological distress, country of residence did not predict the odds of having any disorder. 2) Overall, 22.0% of children were identified per their own evaluation as having at least one mental disorder, ranging from 16.4% in the Netherlands to 27.9% in Bulgaria. The prevalence of internalizing disorders was 18.4% across countries and ranged from 11.8% in the Netherlands to 24.3% in Turkey. The prevalence of externalizing disorders was lower with an average of 7.8%, ranging from 3.5% in Turkey to 10.5% in Bulgaria. Combining samples across European countries, 1 in 5 children reported internalizing problems and 1 in 12 children externalizing problems. **Conclusions:** This lecture aims to present and discuss child mental health measure instruments from different informants perspectives, comparisons across countries and the challenges for interpreting the difference.

Psychiatric comorbidity and intellectual disability

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Most research on the prevalence, distribution, and psychiatric comorbidity of intellectual disability (ID) relies on clinical samples, limiting the generalizability and utility of ID assessment in a legal context. This study assessed ID prevalence in a population-representative sample of U.S. adolescents, and examined associations of ID with socio-demographic factors and mental disorders. Data were drawn from the National Comorbidity Survey Adolescent Supplement (N = 6256). ID was defined as: 1) IQ ≤ 76, measured using the Kaufman Brief Intelligence Test; and 2) an adaptive behavior score ≤76, measured using a validated scale. The Composite International Diagnostic Interview assessed fifteen lifetime mental disorders. The Sheehan disability scale assessed disorder severity. We used logistic regression models to estimate differences in lifetime disorders for adolescents with and without ID. ID prevalence was 3.2%, and was more common among those with specific phobia (OR = 1.66, 95% C.I. 1.02, 2.68), bipolar disorder (OR = 7.24, 95% C.I. 2.10-24.99), after adjusted for demographic and clinical covariates. Among those with Axis I psychiatric disorder, adolescents with ID and mental disorders were significantly more likely to exhibit severe impairment than those without ID, across a broad range of disorders. These findings highlight how sample selection and overlap between ID and psychopathology symptoms might bias understanding of the mental health consequences of ID. For example, associations between ID and behavior disorders widely reported in clinical samples were not observed in a population-representative sample after adjustment for socio-demographic confounders. Valid assessment and understanding of these constructs may prove influential in the legal system by influencing treatment referrals and capital punishment decisions.

5.L. Risk factors for cancer

Smokeless tobacco and waterpie use and risk of lunbg cancer

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Background:

Over 300 million people worldwide use smokeless tobacco (ST) with rates of use exceeding that of cigarette smoking in much of South-East Asia and amongst certain groups in the Middle East. This study investigated the association between consumption of ST use and waterpipe smoking and lung cancer risk.

Methods:

A systematic review and meta-analysis was carried out to summarise the findings from the epidemiologic studies of the risk of lung cancer associated with ST use and waterpipe smoking. Search was carried out in MEDLINE, Embase, Web of Science and OpenSIGLE to identify studies published before 18th October 2018. A combination of MESH terms and keywords were used including lung cancer, smokeless tobacco, snuff, snus, betel quid, gutka, naswar, zarda, shisha. Only studies adjusted for cigarette smoking or conducted in non-smokers only were included in the analysis. Random effects meta-analysis was carried out to pool the risk estimates and subgroup analyses was carried out by tobacco type and in studies of non-smokers.

Results:

The search yielded 1796 articles, of which 24 studies (19 studies of ST, four of waterpipes and one of both) including 6777 lung cancer patients were included in the meta-analysis. Lung cancer was found to be positively associated with waterpipe smoking (pooled OR 3·06 (95%CI 1·68 – 5·60) and betel quid tobacco chewing (pooled OR 1·77 (95%CI 1·06 – 2·95)). Among non-smokers, any type of ST use was associated with lung cancer (pooled OR 1·46 (95%CI 1·04 – 2·07).

Conclusions:

Our study suggest positive associations between ST use and waterpipe smoking and lung cancer risk. Given the high prevalence of ST use in much of the developing world, public health policies and international tobacco control efforts should focus on aiming to reduce ST use in addition to cigarette smoking.

Key messages:

- The risk of lung cancer is approximately three times higher in waterpipe smokers than in non-smokers.
- International tobacco control efforts should focus on aiming to reduce smokeless tobacco use in addition to cigarette smoking.

Mapping variation in breast cancer screening: Where to intervene?

Cindy Padilla

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Introduction:

Mammography screening can reduce breast cancer mortality among women aged 50 years and older. Small geographic areas with lower breast cancer screening uptake may reflect gaps in screening efforts. Our objective was to identify the geographic variations of breast cancer screening uptake among women aged 50-74 years in the Lyon Metropole area, France.

Methods:

We used spatial regression models within a generalized additive framework to determine the clusters of census blocks with significantly lower risk of breast cancer screening uptake. Census block-level data on breast cancer screening participation rates were calculated for women aged 50-74 years who did a mammography between 2015-2016 after being invited with a letter by the cancer screening organization. Using smoothed risk maps adjusting for covariates, we estimated the impact of the spatial distribution of deprivation index, part of opportunistic screening on breast cancer screening participation.

Results:

Between 2015 and 2016, the participation rate of organized breast cancer screening was 49.9%. As hypothesized, women living in highly deprived census blocks had lower participation rates compared to less deprived. However, women living in rural areas with fewer certified mammography services than in urban areas had the highest participation rate. Spatial analyses identified four clusters, one located in an urban area and three in suburban areas.

Conclusions:

Our analysis indicates that depending on the location of the cluster, the influence came from different variables. Knowing the impact of site-specific risk factors is important for implementing an appropriate prevention intervention.

Key messages:

- Spatial analysis for cancer screening can help to improve health initiatives.
- This study contributes to a better understanding of the cluster-specific factors that explain geographic disparities.

Clinical and policy contexts for cancer care: Evidence from Denmark, Ireland and Ontario (Canada)

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Background:

We know there are large differences in cancer survival between countries. We know much less about why they exist and persist. In the International Cancer Benchmarking Partnership, we are seeking to understand the influences on patient journey in different countries. In this study we explore how health system factors impact on cancer care in Denmark, Ireland, and Ontario (Canada) to identify common themes, national specificities, and messages for other health care providers.

Methods:

We systematically analysed (i) cancer policy and strategy documents from the three jurisdictions, published between 1995-2014 (n = 20) and (ii) interviews with key informants representing government, health services providers, professional bodies and patient organisations (n = 25). We thematically analysed both datasets using NVivo.

Results:

Five themes emerged from the document review and were confirmed by interview: governance, quality assurance, service delivery, infrastructure and workforce. All three jurisdictions introduced a designated organisation to lead, monitor and, in Ontario, fund cancer services. Reducing wait times was prioritized, with the expansion of diagnostic capacity from the 2000s, for example. Concentrating services into fewer specialist centres was widely viewed as crucial for improving survival for some cancers. Yet policy intent was not always successfully realised on the ground, with lack of sustained investment, organisational barriers or logistical challenges impeding implementation. Jurisdictions face particular challenges maintaining and upgrading infrastructure and equipment, and recruiting and retaining critical staff, specifically in radiology and primary care.

Conclusions:

Cancer care is complex and understanding the interrelationships between factors acting at different levels of the health system is important to improve outcomes. Continued investment in infrastructure and people will be essential.

Key messages:

- Countries face common challenges in creating health systems that optimise cancer outcomes.
- Sustained investment in equipment and human resources will be critical to optimise cancer care and survival.

The positive effect of workplace accommodations on employment five years after a cancer diagnosis

Caroline Alleaume

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Background:

Each year, almost 400,000 new individuals are diagnosed with cancer in France and nearly half of them are in the working age. The disease was found to have a negative impact on professional life, especially for the most vulnerable cancer survivors. Literature reviews have pointed out the lack of studies focusing on the evaluation of interventions. In France, workstation layouts are recommended by the French law, but not mandatory to facilitate return to work. The aim of this study was to explore the effect of having a workstation layout after a cancer diagnosis on maintenance in employment five years after diagnosis.

Methods:

We used the French VICAN survey carried out in 2015/2016 on living conditions five years after a cancer diagnosis. Using propensity score matching, we matched two subsamples (with and without workstation layout) to investigate the effect of workstation layout taking into account the characteristics associated with the access to these arrangements.

Results:

Among the 1,514 individuals aged between 18 and 54 at diagnosis and employed in a salaried job at this time, three in five (61.2%) had a workstation layout within the five years following the diagnosis: 35.5% had a position type layout, 41.5% had a schedule layout, and 49.2% had a working time layout. Among those who had a workstation layout, 89.7% were still in employment five years after diagnosis against only 77.8% of those who did not so (p.value<0,001). After matching, having a workstation layout increased maintenance in employment from 77.8% to 95.0% (Average workstation layout effect on the treated of 0.172, 95% CI = [0.114; 0.229]).

Conclusions:

Having a workstation layout after a cancer diagnosis strongly increases maintenance in employment of five years cancer survivors. More research is needed to better understand the differences in access to these arrangements and the related selection effect.

Key messages:

- Workstation layout increases maintenance in employment of survivors five years after a cancer diagnosis. Therefore, it should be used more systematically to facilitate work with a chronic disease.
- Having a workstation layout may constitute a disadvantageous selection bias for more vulnerable workers. It can also lead to discrimination feelings.

5.M. Nutrition and food safety

Children's food intake in relation to preschool-level facilitators and barriers of healthy nutrition

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Background:

Childcare is an important setting for young children's food consumption as, in Finland, most children eat three meals a day in childcare. Thus, it is important to recognize determinants of children's dietary intake in childcare. The aim of this study was to examine food-related factors at preschool and manager-level and their association with children's fruit, vegetable and fibre intake at preschool.

Methods:

The study was a part of the cross-sectional DAGIS survey conducted in 2015-2016. It aimed to examine 3-6-year-old preschoolers' energy balance-related behaviors in Finland. Preschool managers from 58 preschools filled in a questionnaire on food and nutrition related factors at preschool such as kitchen type, food policies, food education, the manager's possibilities to impact fruit and vegetable supply and cooperation challenges with the catering service. Preschool personnel kept food record for the children (n = 585) on two preschool days. Multilevel linear and logistic regression analyses were conducted with age, gender and municipality as confounders, preschool-level factors as independent variables and children's vegetable (g/day) and fruit (yes vs. no) consumption, and fibre intake (g/MJ) as outcome variables.

Results:

Having many written food policies in the preschool was associated with higher intake of vegetables (p = 0.01) and fibre (p = 0.03) among the children. Having at least 2 out of 3 different cooperation challenges with the catering service was associated with higher intake of fibre (0.03) and lower odds of eating fruits (p = 0.01).

Conclusions:

Written food policies and manager-reported challenges with the catering service were associated with children's vegetable, fruit and fiber intake at preschool. Factors that are relatively distal from the meal situations may impact children's food intake at preschool and should be taken into account when promoting healthy food intake at preschool, but more studies are needed.

Key messages:

- Written food policies and good cooperation between the preschool and catering services may be of benefit to children's healthy food intake at preschool.
- The relation between preschool and manager-level factors and children's food intake are very little studied, and thus more studies are needed before conclusions can be made.

How does education affect diet in women? A comparison between Central and Southern Europe cohorts

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Background:

Comparisons among European populations is useful to identify opportunities for planning nutrition strategies to reduce social inequalities in health. Our study aims to identify dietary patterns in adult women and to evaluate their association with educational level in Czech Republic and Italy, which display different health inequalities.

Methods:

We performed a cross-sectional analysis of women (aged 25-64 years) with no history of severe diseases, who have been recruited in Brno (Czech Republic; n = 957) and in Catania (Italy; n = 841). Dietary patterns were derived by Food Frequency Questionnaire and Principal Component Analysis. We tested the association between educational level (low vs. high) and adherence to dietary patterns. Logistic regression models were used to assess Odds ratio (OR) and 95% confidence interval (CI), after adjusting for age, employment status, marital status, smoking status, parity, BMI, and menopause.

Results:

In both cohorts, we identified the healthy and the unhealthy dietary patterns. We observed that women with high adherence to the healthy dietary pattern were less educated in Czech Republic, and more educated in Italy. After adjusting for covariates, low educational level was positively associated with adherence to the healthy dietary pattern among Czech women (OR = 2.033; 95%CI = 1.301-3.176; p = 0.002), and negatively associated among Italian women (OR = 0.166; 95%CI = 0.029-0.952; p = 0.044). No association was identified between educational level and the unhealthy dietary pattern.

Conclusions:

In the Italian cohort, findings were consistent with the notion that healthy dietary choices are less common among low-educated groups. By contrast, in newly developed countries such as the Czech Republic, the ''nutrition transition'' from traditional staples to western foods might be more common in highly-educated groups, probably due to the advocacy of Western culture through mass media and commercial marketing.

Key messages:

- Low educational level has an opposite effect on healthy diet, exhibiting a positive association in Czech women, and a negative association in Italian women.
- From a broader perspective, the observed effect of education on diet quality helps explain social health inequalities in Central and Southern Europe.

Impact of Danish ban of industrial produced trans fatty acids on serum cholesterol levels 1993-2006

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Industrially produced trans fatty acids (ITFA) increase the LDL:HDL ratio and hereby the risk of cardiovascular disease (CVD). Therefore, ITFA has been reduced in Western Europe over the last decades but is still high in Eastern Europe and in subgroups of the EU population. Regulatory interventions are the only way to minimize ITFA intake for all. The Danish ITFA ban (2004) can elucidate the impact of elimination of ITFA on CVD. In Denmark cardiac mortality declined by 70% through 1980-2009. Data on ITFA intake and blood lipids from the 1990s, where the average Danish ITFA intake was about 3 g/d, and up to today are needed to study the correlation between intake of ITFA and serum cholesterol (CHOL). The Danish food composition databank has been updated with TFA intake values. Hereby the correlation between ITFA intake and CHOL level in Denmark from 1993 -2006 can be investigated.

Methods:

Ecological analyses of ITFA and CHOL in participants from 3 cohorts:

- Diet, Cancer and Health (1993-1997); n = 57,054; 50-64 yr
- Inter99 (1999-2001); n = 6,784, 30-60 yr
- Health 2006 (2006); n = 3,471, 18-69 yr

Results:

ITFA-intake was 0.02 g/d in Inter99. Data will be extended to include ITFA intake data of all cohorts as well as age adjusted correlations with CHOL.

Mean CHOL all men (n = 31,675) declined from 6.3 ± 1.0 in 1993 to 5.4± 1.0 in 2006

Mean CHOL all women (n = 34,675) declined from 6.6 ± 1.5 in 1993 to 5.4± 1.1 in 2006

Similar declines were found in participants without self-reported hypercholesterolemia:

Mean CHOL men (n = 28,999) declined from 6.1 ± 0.9 in 1993 to 5.1± 1.0 in 2006

Mean CHOL women (n = 32,593) declined from 6.5 ± 1.5 in 1993 to 5.2± 1.1 in 2006

There was a significant decrease in CHOL ($p < 0.0001$) from 1993, where average Danish intake of ITFA was about 3 g/d to 2006 where ITFA was banned

Conclusions:

Data show a non-treatment related significant decline in CHOL. Data from 2000 and 2006 are collected in younger populations, which may explain lower CHOL levels.

Key messages:

- Cholesterol decline significantly in Danish participants simultaneously with ITFA elimination.
- Results are important for decision makers in countries which consider ITFA regulation.

Ultra-processed food intake and risk of type 2 diabetes in a French cohort of middle-aged adults

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Objective:

The consumption of ultra-processed foods has been increasing during the last decades, and has been previously associated with increased risks of mortality and several chronic diseases. The objective of this study is to assess for the first time the prospective associations between consumption of ultra-processed foods and the risk of type 2 diabetes (T2D).

Methods:

104707 participants aged at least 18 years (median age 41.5 years) from the French NutriNet-Santé cohort (2009-2019). Dietary intakes were collected using repeated 24 hour dietary records, designed to register participants' usual consumption for 3300 different food items, categorized according to their degree of processing by the NOVA classification. Associations between ultra-processed food intake and risk of T2D were assessed using multi-adjusted Cox proportional hazard models.

Results:

Ultra-processed sugary products, fruits and vegetables, and beverages were the highest contributors of the ultra-processed category (respectively 27.9, 18.5 and 15.6%). Ultra-processed food intake was associated with a higher risk of T2D (n = 821 incident cases; hazard ratio for an absolute increment of 10 in the percentage of ultra-processed foods in the diet = 1.15 (1.06-1.25); P = 0.0009, 582252 person-years). These results remained statistically significant after adjustment for other metabolic comorbidities, for several markers of the nutritional quality of the diet (red meat and sugary drinks consumption, intakes of saturated fatty acids, sodium, sugar, dietary fiber or Healthy/Western patterns derived by principal component analysis) and after a large range of sensitivity analyses.

Conclusions:

In this large observational prospective study, higher consumption of ultra-processed foods in the diet was associated with a higher risk of T2D. Public health authorities in several countries recently started to recommend privileging unprocessed/minimally processed foods and limiting ultra-processed food consumption.

Key messages:

- The consumption of ultra-processed food is associated with an increased risk of type 2 diabetes. As the French Public Helath agency recommends, their consumption should be limited.
- Nutritional composition, food additives, contact materials, or neoformed contaminants might play a role in these associations and further studies are needed to understand their relative contribution.

Effects of salt reduction on cardiovascular risk factors. The STRIVE-study

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Potential adverse effects of reducing salt intake in the general population are discussed. This study aims to explore the effect of gradually reducing salt intake in a real-life setting.

The study was a 4-month cluster RCT with families randomly assigned to either A) salt reduced bread, B) salt reduced bread and dietary counselling or C) standard bread (control) Participants in intervention A received bread gradually reduced in salt content from 1.2 g salt/100g (regular) to 0.6 g salt/100g in ryebread and 0.4 g salt/100g in wheat bread. Participants in intervention B received the same bread as intervention A but in addition, they received dietary advise on how to further reduce their salt intake and promote potassium. The control group received regular bread (blinded). Changes in outcomes were assessed using linear mixed models.

Results:

A total of 89 Danish families (155 adults; 156 children) participated in the study. A total of 291 (94%) participants completed the intervention. Results are preliminary. Intention to treat analyses showed no significant effects of the salt reduction intervention on changes in systolic and diastolic blood pressure, plasma triglyceride. A small, but significant (-0.26 mmol/l; P = 0.02) decrease in total plasma cholesterol was shown in intervention group A. Per protocol analyses, including only participants in the intervention groups that decreased their salt intake by at least 20% from baseline to 4-month follow-up, showed a significant decrease in diastolic (-3.5 mmHg; $P < 0.0001$) and systolic (-6.3 mmHg; $P < 0.0001$) blood pressure, total cholesterol (-0.25 mmol/l; P = 0.0009), LDL cholesterol (log. transformed) (-6%; P = 0.03) and plasma triglyceride (log. transformed) (-17%; P = 0.04). No significant effects were found for HDL plasma cholesterol, aldosterone, renin, plasma glucose and HbA1c.

Conclusions:

Reduced salt intake were associated with beneficial changes in cardiovascular risk factors. No adverse effects were observed.

Key messages:

- Reduced salt intake were associated with benificial changes in cardiovascular risk factors.
- No adverse effects were observed.

A future for all to INHERIT: taking integrated action on the environment, health and equity

Caroline Costongs

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The need to act on climate change, and to modify how we live, move and consume is urgent; failure to do so will have catastrophic effects on health and wellbeing over the medium and long term. INHERIT, a large multi-sectoral research initiative (2016-2019) has explored what can be done to seize this as an opportunity to encourage and enable people to modify their behaviours towards ones that simultaneously protect the environment and promote health and health equity (the ‘INHERIT triple-win’).

One strand of INHERIT’s work has involved the identification, implementation and evaluation (qualitative, quantitative and cost-benefit) of 15 promising ‘triple-win’ interventions across the EU. INHERIT has also developed four positive scenarios of more sustainable futures, questioned 183 people about these, and surveyed 10,288 people from five countries across the EU about their current behaviours and incentives for change.

The results of these investigations paint a complex picture of what can be done to encourage and enable more people across the socio-economic gradient to adapt their behaviours. They reflect that improving health is a powerful motivator for action to protect the environment, yet there is often confusion about what is considered ‘sustainable’, whether this is always ‘healthy’ and vice-versa, let alone equitable. There is resistance in some countries to modifying some behaviours, like meat consumption. Many people fear that technological solutions will drive up isolation and inequities, and desire stronger community ownership over processes like food and energy production.

INHERIT outcomes reflect that it is possible to conjure common visions of the kinds of societies we want to transition to, and a willingness and potential to work across sectors to achieve these. This requires stronger individual and collective leadership, also from public health actors, who can play a key role in bringing together different actors and sectors to achieve these visions.

Key messages:

- The urgent need to address the environmental crisis presents an opportunity to simultaneously manage closely related societal challenges linked to health and equity.
- Public health actors can play a key role by bringing together the sectors, evidence and examples to instigate change, around the common interest of promoting human, which depends on planetary, health.

Dietary pesticide exposure profiles in the NutriNet-Santé cohort

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Pesticides are commonly used in current agriculture and some negative effects are suspected for human health but evidence from dietary exposure in the general population is lacking. This study aimed to describe dietary pesticide exposure among French cohort participants. Organic and conventional food consumption was assessed using a self-administered semi-quantitative food frequency questionnaire in 2014 in the NutriNet-Santé cohort. Exposure to 25 commonly used pesticides was estimated using contamination data (CVUA Stuttgart) accounting for farming system. Dietary pesticide exposure profiles were identified using Non-negative Matrix Factorization, adapted for non-negative sparse data and then introduced in a hierarchical clustering process. The 6 identified clusters ($n = 34,193$) seemed to be exposed to the same molecules with gradual intensity. Cluster 1 was characterized by the lowest energy-intake and dietary pesticide exposure, and high consumption of organic food groups (23.3%). Proportion of male participants was higher than in other groups. Clusters 2 and 5 were characterized by intermediate energy intake, lower organic food consumption and intermediate pesticide exposure. High conventional fruits and vegetables intake and high pesticide exposure were observed in cluster 3, composed of a lower smokers’ proportion. Cluster 6 was characterized by the highest energy intake, lowest organic food consumption (9%), and highest pesticide exposure; high consumption levels of conventional fruits, vegetables and a higher proportion of vegans were observed. For cluster 4, pesticide exposure varied more across molecules than for other clusters. The highest exposures were observed for Acetamiprid, Azadirachtin, Cypermethrin, Pyrethrins, Spinosad pesticides. Proportion of organic food in the diet was the highest (31.5%).

Dietary pesticide exposures seem to vary across the clusters and related to the proportion of organic food in the diet.

Key messages:

- Dietary pesticide exposures seemed to vary gradually across the clusters and depending on the proportion of organic food in the diet.
- High consumers of conventional FV in this cohort seem to be more exposed to our selection of pesticides.

5.N. Round table: Health literacy and life skills: children and adolescents’ tools for health promotion

Organised by: EUPHA (HP)
Chair persons: Luís Saboga-Nunes - EUPHA (HP), Carine Simar - France
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This round table aim is to explore transculturality of methods and instruments to assess Health Literacy (HL) and Life Skills (LS) in Childhood and Adolescence and integrate this discussion in the overall context of HL research in the European context.

HL and LS focuses on the knowledge and skills that enable people to access, understand, evaluate and apply information in order to make health decisions and promote health and well-being. While research in the past focused basically on adults, HL & LS research in children and adolescents is a novel field of study.

Specific study cases from France and Portugal will help frame the discussion.

The CrAdLiSa (developing ChildRen and ADolescents’ health Literacy) research project is focused on exploring the usability of previous tools and instruments - already implemented in other European countries - to evaluate the feasibility of their cultural adaptation and validation.

The research focuses on a public health perspective addressing qualitative, quantitative, and intervention research in context of health literacy (HL) and Life Skills (LS) and e-HL of children, adolescents, and professionals working in education, health, and social care settings.

Following the track left by Nairobi (2009) and the Shangai declarations (2016) HL has evolved into a significant public health and health promotion goal which has been included to several public health policies (eg. in Portugal, the General Health Directorate of Health (GHDH), established its first policy that focused on children and adolescents HL PNSE|2015, 8815/2015 DR, II, n° 154, 10-08-2015).

Present first time empirical findings and developments of these projects and open the floor for further discussion. On top of this, LS will be addressed from the methodological perspective. Thereby, it will shed light on the HL and LS of children and adolescents and link the current debate with contemporary public health approaches to advance the field of HL and LS in childhood and adolescence.

The round table will include 3 presentations with up to 15 minutes input followed by discussion. The first presentation is a theory-driven project about developing a conceptual LS model adaptation for children and adolescents in France. The second will introduce a HL questionnaire and its validation data from a pilot study in 4th grade (9-10 y.o.). The third presentation will explore findings of a pilot study by using a HL measure in children (9-10 y.o.) and the relationship between functional HL and subjective health.

This round table offers a forum for researchers, practitioners and policy-makers interested in HL and health promotion. By dialogue and two-way communication lively interaction and vivid discussions will be facilitated. This will allow discussing results regarding their benefit for improving HL research, practice, and policy-making, support further synergies, facilitate networking and collaboration, and support international capacity building.

Key messages:

- There is need for empirical health literacy and life skills research in children and adolescents.
- A more broad discussion needs to be developed regarding concepts, instruments and strategies for health literacy and life skills promotion.

French validation of a measurement scale of life skills for children

Carine Simar

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Background:

According to WHO (2003), 'Life skills' are defined as psychosocial abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life. They are loosely grouped into three broad categories: cognitive for analyzing and using information, personal for developing personal agency and managing oneself, and inter-personal skills for communicating and interacting effectively with others. Skills-based health education is an approach to creating or maintaining healthy lifestyles and conditions through the development of knowledge, attitudes, and especially skills, using a variety of learning experiences, with an emphasis on participatory methods. Our aim was to develop an integrated measure of the life skills grouped into three broad categories of skills for children who are at least 9 years old. The present communication is focused on the validation in a French validation of a tool measuring social competencies in children - Weiss et al. (2014) - which represents one of the three categories of psychosocial competencies (emotional and cognitive competencies).

Methods:

Data were collected three times during year 2017-2018: 614 questionnaire (T1), 564 (T2), 331 (T3) - 311 children filled the questionnaire three times. Three types of analyses were conducted in order to assess the validity and reliability of social competence (SPSS version 23 et AMOS version 21): Validity of construct, concurrent validity and reliability.

Results:

The results show a high reliability and a good validity of construct and concurrent, thus indicating satisfactory psychomotor qualities.

Conclusions:

This compendium will also assess the validity and reliability of this scale with the data collected at the other two measurement times and study the predictive validity of the scale. The same process will be applied to the cognitive skills measurement scale for validation. Acknowledgment: CPS team and schools and pupils involved.

Portuguese cultural adaptation and validation of the European Health Literacy Survey (HLS-EU) for children aged 9 to 10 (HLS-EU-PTc)

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Introduction:

To measure Health literacy (HL) as proposed in the context of the European Health Literacy Survey/questionnaire (HLS-EU-Q), the Health Literacy for Children and Adolescents (HLCA) Consortium (GE) adapted it for children. A trans-cultural adaptation and validation to Portuguese (HLS-EU-PTc), will supply policy makers, experts and health professionals with information that can promote healthier communities while fighting health disparities.

Methods:

After permission was granted from the HLCA Consortium the TRAPD model was used (eg parallel translation, focus groups, two back translations). An assessment and pretesting of HLS-EU-PTc was done with 16 children for cognitive testing. A qualitative explanatory (n = 16) and quantitative, cross-sectional study (n = 82), age mean 13, SD 0.96, from Portugal (mainland) was implemented for proceed with the validation process. A variety of measures were obtained like internal consistency and mean scores.

Results:

Preliminary results for evaluation of the psychometric properties of the HLS-EU-PTc show satisfactory internal consistency (Cronbach's alpha coefficient 0.87). In a scale from 1 (very difficult) to 4 (very easy) for indicators of the HLS-EU-PTc, we have a mean of 3.25 and a SD of .478.

Conclusions:

This is the first study to examine the feasibility of a Portuguese version (HLS-EU-PTc) of the HLS-EU-Q adapted for children and it indicates high internal consistency and level of self-reported HL. The usefulness of the HLS-EU-PTc instrument can be further discussed while planning public health policy strategies from the HL standpoint. The validated HLS-EU-PTc version of the HLS-EU-Qc survey, with the user's manual can be accessed at www.literacia-saude.info.

Health Literacy questionnaire development for 9 and 10 years old: a discussion of assessment tools!

Alcinda Reis

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Background:

With Health literacy (HL) investments - to promote health and self-care during people's life cycles (childhood, especially) - health professionals approach is multi-dimensional: within the family, school settings and community. The objective of this study is to explore the feasibility and usability of a questionnaire to characterize HL levels among 9 and 10 years old. It is expected that this will help health care personal to better focus health promotion initiatives in the school setting.

Methods:

The CrAdLiSa project in conjunction with the HLCA German Consortium, implemented a field test for the newly developed HL assessment tool for children in the Portuguese context. This is a deductive-inductive, exploratory-descriptive study including 16 children, with 9 and 10 years old, from 2 different elementary schools in Santarém District (rural and urban areas). Semi-structured interviews aim at exploring the cognitive appraisal of concepts and indicators at the base of the questionnaire developed to assess HL levels. Data was subjected to content analysis, with a priori and a posteriori categorization.

Results:

Preliminary results point to the cognitive comprehension by children of the feasibility of an instrument to assess their HL levels. It depicts discriminatory capabilities (to allow characterization of low, medium or high levels of HL). Children living in urban areas, having better financial resources are less likely to develop obesity, or low weight. Better self-perception of school performance, good relationship with family members, parents with higher education or higher levels of HL appear to have better quality of life.

Conclusions:

Results suggest the need to invest in children's and families' HL, while taking into consideration personal, environmental and socioeconomic determinants. School settings should be considered as a natural arena to improve children's (and, as a result, families' and communities') HL levels.

5.O. Workshop: Climate change and energy issues in our life-course and our environment

Organised by: EUPHA (ENV)
Chair persons: Peter Van Den Hazel - EUPHA (ENV), Marija Jevtic - EUPHA (ENV)
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Globalization and economic trends bring enormous changes to civilization. Growth in demographic, economic and human activities alters the natural global environment beyond safe or sustainable borders. Energy domain is one of these borders we cross. These changes pose threats to human health and with the rise in temperature the visible symptoms are seen in the difficulty of securing sufficient and clean energy, as well as the appropriate supply of health-safe food and water.

Overall progress made through the use of renewable energy sources should reduce risks and allow for the improvement of basic living conditions. However, a significant shift in reducing inequalities and improving global quality of life and health indicators requires transformation of many sectors.

The calculated health impacts and health costs from Western Balkan coal plants are a case study that show 3,000 premature deaths, 8,000 cases of bronchitis in children, and other chronic illnesses; costing both health systems and economies a total of EUR 6.1-11.5 billion. Another example illustrates how schools can contribute to change. Results from behavioral change studies show the audience in which frame they fit in their possibilities to influence their behavior towards their living environment. Followed by a discussion on strategic choices on how to motivate people to protect their environment and climate.

Key messages:

- Energy issues are a main driver in reducing health risks.
- Knowledge about framing our values towards climate change might change our behavior.

Climate and energy issues as preconditions for health and well being

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Globalization and modern economic trends bring enormous changes to civilization. The human health pattern also changes and the overall system becomes more complex. Exponential growth in demographic, in economic and in human activities alters the natural global environment beyond safe or sustainable borders, which refers to energy for the future, as well as climate change in the broadest sense. These changes pose threats to human health and with the rise in temperature the most visible symptoms are seen in the difficulty of securing sufficient energy amount, as well as the appropriate supply of health-safe food and water. Global influences on the health of the population require changes in different sectors (economy, health, economy, etc).

Even though, World Meteorological Organization data show that the five-year average global temperature from 2013 to 2017 was at a record level, and that in 2017 it was one of the three hottest years. Today, about 3 billion people have no access to safe food and/or water and are also exposed to significant air pollution. Nearly one billion people have no electricity in the household, and 13% of the world's population has no access to modern electricity. Air pollution indoors by using combustible fuels for domestic energy caused 4.3 million deaths in 2012 (women and girls accounted for 6 out of 10). Energy has a dominant contribution to climate changes and accounts for about 60% of overall global greenhouse gas emissions.

Overall progress made through the use of renewable energy sources should reduce risks and allow for the improvement of basic living conditions. However, a significant shift in reducing inequalities and improving global quality of life and health indicators requires transformation of many sectors. Energy, therefore, is crucial for almost every challenge the world is facing today (climate change, food production, health systems, etc.). SDG 7 is particularly important and is linked to other SDGs.

Impacts of transboundary coal air pollution from Balkan region to European public health

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Background:

Western Balkan region holds coal power plants that are old, inefficient and substandard. In 2016, the region's 16 plants emitted more SO2 than the entire 250 European coal power plants. In this study we modelled the transboundary nature of air pollution affecting this region and EU.

Methods:
We calculated health impacts and costs from Western Balkan coal plants by the following steps: (1) Identify coal power plants in the Western Balkans in 2016; (2) Source 2016 coal power plant emissions data; (3) Model the pollutant exposure resulting from the emissions from Western Balkan coal power plants; (4) Calculate health impacts associated with modelled pollutant exposures; (5) Attribute the health impacts to individual coal power plants; (6) Calculate the cost of the health impacts.

Results:
The modeling shows that every year Western Balkans' plants cause 3,000 premature deaths, 8,000 cases of bronchitis in children, and other chronic illnesses costing both health systems and economies a total of € 6.1-11.5 billion. The EU bears the majority of health cost, more than half of these health costs relate to the EU (€ 3.1 to 5.8 billion), a third (32%) to Western Balkan countries (€ 1.9 to 3.6 billion) and around 17% in other countries. Moreover, Bulgaria and Croatia's health budgets are the most heavily impacted. Costs needed to cover the health impacts of Western Balkan coal pollution amount to € 0.3-0.7 billion. For Bulgaria this is the same as 10%-18% of the country's total health expenditure in 2016. For Croatia (costs of € 0.2-0.4 billion), it amounts to 8%-14% of total health expenditure in 2016.

Discussion:
These results imply an coal phase out to protect public health. Strong enforcement of the existing pollution control measures are needed. Political processes such as EU accession of Balkan countries may be a door to prioritise pollution control and air quality, in particular by excluding companies planning new coal power capacity from EU financing.

Healthy schools, healthy children – achieving climate-friendly and health promoting buildings for future generations

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Children spend a significant amount of their time in schools indoors, and the quality of this indoor environment influences their health and their ability to learn. Recent studies have demonstrated the specific vulnerability of children to air pollution, especially particulate matter (PM). However, awareness among the public, parents and policy-makers on indoor air quality in schools is low, and media reports are scarce. Therefore policy measures have largely focused on providing clean air outdoors. With the political drive to improve the climate footprint of buildings, including schools, there is an urgent need to consider air quality and health.

The presentation will present results from a project by the Health and Environment Alliance on citizens science monitoring of outdoor and indoor air quality in more than 40 schools in 6 European capitals, Berlin, Paris, Madrid, Warsaw, Sofia and London in the spring of 2019. Pollutants measured included PM and NO2; as well as CO2 concentrations. Strategies on how to achieve an energy efficient and health promoting school environment will also be discussed.

How to frame our behaviour in order to limit climate change?

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The climate is changing and speedy changes in society are needed to keep the damage within survival ranges. The aim is to keep the average raise of global temperature below 2 degrees Celsius. Changes in behavior of the overall population are needed to realize this aim. How can we get people to change? The research field of environmental psychology looks at framing issues to promote changes of behavior. More information helps to make people make decisions. Motivation is more important. Motivation is driven by our values and self-image. Four values are important for environmental behavior: hedonic, egoistic, altruistic and environmental values. Besides that culture, personal and timing issues play a role. The workshop explores the values in persons according to different examples. Can we influence the values to which we adhere? Socio-economic traits in people only explore a few percent in differences.

Discussion: different strategies can be used with people with different dominant values.

Public health is a major domain to support the local authorities to endorse the behavioral changes in the general population in order to limit the temperature increase.

5.P. Prepare, prevent and protect

Development of a European Public Health Emergency Preparedness Training Toolkit

Stefano Guicciardi

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Background:
In 2017, under the supervision of the European Centre for Disease Prevention and Control (ECDC), a list of competencies and knowledge and skill statements for EU professionals working in Public Health Emergency Preparedness (PHEP) systems were identified and integrated into a Competency Model. Building on these efforts, a PHEP competency-based training toolkit was developed, pilot tested and finalized with the goal of providing a standardized training resource for experts involved in response to cross-border threats to health.

Objectives:
Led by the ECDC, an international research team drafted a preliminary version of a curriculum consisting of five modules, with a list of targeted competencies, learning objectives, reading and training methods including case studies and simulation exercises. In May 2018, the curriculum was pilot tested in a 3.5-day training course at the University of Bologna, Italy. The participants included 20 representatives from 8 EU Member States. An evaluation strategy, combining both quantitative and qualitative methods, was designed to assess the impact of the training on participants' applied knowledge and competence.

Results:
Overall, the participants' feedback on the pilot course was positive, with scores from 4.0 to 4.8 out of 5 for all the items considered. Several suggestions were made both by the trainers and the trainees to enhance the effectiveness of the learning activities, and the curriculum was integrated into a training

toolkit with more exercises, teaching materials and a guide for facilitators.

Conclusions:

This European Public Health Emergency Preparedness Training Toolkit is the first EU competency-based toolkit intended to help Member States improve their response to public health emergencies through standardized training. Designed for individuals working in strategic positions at the national level, its general approach, modular structure and content are relevant and can be tailored to a wider range of professionals.

Key messages:

- To improve PHEP in the EU, competency-based curricula and standardized training programs and resources for health professionals are needed.
- By enhancing the overall public health professionals' experience and competency, the European PHEP Training Toolkit represents a step towards strengthening preparedness and response systems in the EU.

Heat Waves and occupational injuries: the importance of a consistent working definition

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Introduction:

Heatwaves (HWs) have been linked with increased risk of occupational injuries (OIs). As no consistent definition of HW is globally acknowledged, also the actual impact of HWs on the workplaces is not well defined.

Background and aims:

Daily numbers of workers compensation claims from all Northern Italy (2013 to 2017, warm season: April to September) from Agricultural and Industry economic sectors ($n = 1,907,122$) were associated with daily weather data. The impact of average (Tday) and maximum (Tmax) daily temperatures on the risk of OIs was assessed using a time-stratified case-crossover study. HW was defined by 3 or more days having Tday $>$ 97.5th percentile or by Tmax exceeding 5 °C or more historical reference.

Results:

A total of 1161205 OIs were retrieved (94.4% from industrial sector). Assuming Tday $<$ 90th percentile as the referent category, the risk for OIs was higher for Tday exposure 95 to 97.5th percentiles (OR 1.43, 95%CI 1.09-1.20 for agriculture; OR 1.40, 95%CI 1.03-1.05 for industry) and for exposures exceeding 97.5th percentiles (OR 1.14, 95% CI 1.09-1.20, OR 1.02, 95%CI 1.01-1.03, respectively), and for days characterized by Tmax $>$ 35 °C (OR 1.27, 95%CI 1.21-1.33; 1.03 95%CI 1.02-1.04). An increased risk for OIs was similarly identified during HWs defined by Tday (OR 1.15, 95%CI 1.08-1.23 for agriculture; OR 1.06, 95%CI 1.05-1.08 for industry), while HWs defined by Tmax were characterized by increased risk only for agricultural workers (OR 1.14, 95%CI 1.12-1.16).

Discussion:

Days characterized by very high temperatures were associated with the greatest risk of OIs in the industrial and agricultural settings. As a working definition for HW based on maximum temperatures apparently missed a possible increased risk for OIs in the industrial sector identified by average daily temperatures, our results stress the urgent need for a common and shared definition of HWs, allowing potential stakeholder to put in place appropriate prevention strategies.

Key messages:

- High environmental temperatures are associated with an increased risk of occupational injuries.
- Different working definitions of Heat Wave may lead to missing the actual risk for occupational injuries. A shared definition is therefore strongly needed.

Google Trends and forecasting of influenza epidemics in Lithuania

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Background:

Influenza epidemics are a major public health concern, causing hundreds of thousands of deaths worldwide each year. Studies suggest a possible beneficial use of online activity monitoring in influenza epidemics surveillance and forecasting. Until the present time Google search user activity has not been assessed for forecasting of influenza epidemics in Lithuania. Though this country has 2.8 million residents and mother language of majority of them is Lithuanian. Thus, we assessed a possible use of Google Trends for forecasting of influenza epidemics in Lithuania.

Methods:

We translated Google queries most commonly analyzed for forecasting of influenza epidemics by other researchers to Lithuanian language and used Google Trends to retrieve data about frequency of their usage in Google Search during the period of last 5 years. We assessed cross-correlation between usage frequency of each query with an incidence rate of acute upper respiratory tract infections (AURTI) and influenza. Providing data available 2 weeks before the first announcement of influenza epidemic, for the query with the strongest correlation we constructed the autoregressive integrated moving average (ARIMA) model and used it to make a forecast for upcoming 9 weeks. Then we assessed the cross-correlation between the forecast and incidence rate of AURTI and influenza.

Results:

We found the strongest correlation with an incidence rate of AURTI and influenza for a keyword 'gripas' (correlation coefficients were 0.805 and 0.803 for lags of 0 and 1, respectively, $p = 0.001$). 75% true values of the query usage frequency fell into 95% confidence interval of the forecast by ARIMA(1,0,0)(0,1,0)[52] model. Incidence rate of AURTI and influenza correlated with the forecast having coefficients of 0.902 and 0.733 for lags of 0 and 1, respectively ($p = 0.007$).

Conclusions:

Query 'gripas' demonstrated the possible beneficial use in forecasting influenza epidemics 2 weeks before their onset.

Key messages:

- Google Trends has a potential to be used for forecasting influenza epidemics in Lithuania.
- Google Search query 'gripas' proved the most beneficial for forecasting incidence rate of upper respiratory tract infections and influenza in Lithuania.

Socioeconomic Status, Health Inequalities, and Solidarity Trends in a Mass Vaccination Campaign

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Background:

In July 2013, Israel was swept with fear of a polio outbreak. In response to the importation of wild polio virus, the Ministry decided to take preventive action by administering oral poliovirus vaccine (OPV) to all children born after 1 January 2004 who had received at least one dose of inactivated poliovirus vaccine (IPV) in the past. This study analyzes the vaccination uptake rates resulting from the mass polio vaccination campaign on the basis of health inequality parameters of socioeconomic status (SES), principles of solidarity, and the Gini inequality index. The research explores understanding the value of the Gini inequality index within the context of SES and solidarity.

Methods:

The study is based on data gathered from the Israeli Ministry of Health's administrative records from mother-and-child clinics across Israel. The research population is comprised of resident infants and children whom the Ministry of Health defined as eligible for the OPV between August and December 2013.

Results:

The higher the SES level of the area where the mother-and-child clinic is located, the lower the OPV vaccination uptake is. The greater the income inequality is in the municipality where the mother-and-child clinic is situated, the lower the vaccination uptake. As time passed in the vaccination campaign, vaccination uptake increased regardless of the location of the mother-and-child clinics. The highest vaccination uptake rate was found among populations of low SES and low Gini inequality index. The lowest vaccination uptake rate was found among populations of high SES/high Gini inequality index.

Conclusions:

Public health professionals promoting vaccine programs need to make specially-designed efforts both in localities with high average income and in localities with a high level of income diversity/inequality. Such practice will better utilize funds, resources, and manpower dedicated to increasing vaccination uptake across varying populations and communities.

Key messages:

- The higher the SES in municipalities with mother-and-child clinics, the less likely children were to be vaccinated.
- The lower the Gini inequality index, there is a higher polio vaccination uptake among of children.

A practical composite risk score for the development of HUS from STEC infection

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Background:

Haemolytic Uraemic Syndrome (HUS) is a serious complication of Shiga toxin-producing Escherichia coli (STEC) infection and the key reason why intensive health protection against STEC is required. However, although many potential risk factors have been identified, accurate estimation of risk of HUS from STEC remains challenging. Therefore, we aimed to develop a practical composite score to promptly estimate the risk of developing HUS from STEC.

Methods:

This was a retrospective cohort study where data for all confirmed STEC infections in Ireland during 2013-15 were subjected to statistical analysis with respect to predicting HUS. Multivariable logistic regression was used to develop a composite risk score, segregating risk of HUS into very low risk (0-0.4%), low risk (0.5-0.9%), medium risk (1.0-4.4%), high risk (4.5-9.9%) and very high risk (10.0% and over).

Results:

There were 1,397 STEC notifications with complete information regarding HUS, of whom 5.1% developed HUS. Young age, vomiting, bloody diarrhoea, Shiga toxin 2, infection during April to November, and infection in Eastern and North-Eastern regions of Ireland, were all statistically significant independent predictors of HUS. Demonstration of a risk gradient provided internal validity to the risk score: 0.2% in the cohort with very low risk (1/430), 1.1% with low risk (2/182), 2.3% with medium risk (8/345), 3.1% with high risk (3/98) and 22.2% with very high risk (43/194) scores, respectively, developed HUS.

Conclusions:

We have developed a composite risk score which may be of practical value, once externally validated, in prompt estimation of risk of HUS from STEC infection.

Key messages:

- We have identified vomiting, bloody diarrhoea, age <10 years, Shiga toxin 2, STEC infection during April-November and in the East/North-East of Ireland as independent predictors of HUS.
- Using these variables we have developed a practical composite risk score that could be used by clinicians and public health teams to promptly assess the risk of HUS from STEC infection.

Impact of safety-engineered devices (SEDs) on the prevention of percutaneous injuries

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Background:

Needlestick injuries represent a major occupational hazard for healthcare workers as they lead to exposure to biological fluids, with higher risk of bloodborne pathogen infections. In order to minimise this risk, safety-engineered devices (SEDs) have been developed and introduced into the daily hospital practice. An annual survey, conducted by the Department of Public Health Sciences of the University of Turin since 1999, has been evaluating the number of percutaneous accidents in the hospitals of Piedmont (Italy), assessing also the impact of the introduction of SEDs on the injury incidence rate. The aim of this study is therefore to evaluate the efficacy of SEDs in preventing needlestick injuries.

Methods:

Data about percutaneous injuries and needle consumption were obtained from 42 hospitals of Piedmont for the years 2014-2017, concerning all the types of needles and sharps most commonly used in the departments. After considering the overall trend of percutaneous events, standardised rates for 100000 needles were computed for both SEDs and conventional devices. The same analysis was performed considering all sharps except standard needles, which are mainly used for procedures not involving contact with patients (e.g. drug dilution).

Results:

The comparison between the incidence rates with SEDs and conventional devices showed a slightly protective effect of SEDs in 2014, 2016 and 2017, with an incidence rate ratio ranging from 0.78 to 0.97. However, by removing the confounding effect of standard needles, the analysis yielded strong statistical evidence of the protective effect of SEDs for all years (RR = 0.28-0.63). Moreover, the total number of percutaneous events shows a trend of general decrease.

Conclusions:

Safety devices have proved to be significantly effective in the prevention of needlestick injuries, and their introduction into the daily practice is one of the factors who could contribute to a reduction of percutaneous events.

Key messages:

- Safety-engineered devices are a very important tool in the prevention of injuries in healthcare workers, and their introduction into hospital practice has reduced the number of percutaneous injuries.
- Safety-engineered devices are significantly protective against percutaneous injuries compared to conventional ones, especially for procedures involving contact with patients (therefore at high risk).

Rabies vaccination strategies in a western country: a cost evaluation

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Introduction:

Rabies is a fatal but preventable infectious disease with a large disease burden in endemic countries. The risk of contracting rabies for travellers from a Western country is low. However, an increasing number of Dutch travellers, potentially exposed to rabies abroad, consult a clinician for post-exposure prophylaxis. In this study, several interventions were examined on how they might influence costs involved in rabies treatment and prevention, including the most recent vaccination guidelines and the use of intradermal vaccination.

Methods:

A decision tree based economic model was constructed. Costs of new versus old guidelines, intramuscular versus intradermal vaccination, and post-exposure treatment subsequent to increased vaccination coverage in several risk groups were calculated and compared to each other. Statistical uncertainty with respect to numbers of travellers and vaccination coverage was assessed.

Results:

Costs were highest using the old guidelines, estimated at €15.1 million (€405 per vaccinated person). Intradermal vaccinations in combination with the new guidelines led to the lowest costs, estimated at €10.1 million (€270 per vaccinated person). A higher vaccination uptake resulted in higher overall costs. The ratio between the additional vaccinated persons and additional costs in all risk groups was similar, around €104 per person.

Conclusions:

The new rabies vaccination guidelines reduced total costs. Strategies with increased vaccination uptake led to fewer rabies immunoglobulin administrations and fewer vaccinations after exposure but at higher total costs. Although intradermal administration of rabies vaccination on a large scale can reduce total costs of pre-exposure prophylaxis and can positively influence vaccination uptake, it remains a costly intervention.

Key messages:

- The new vaccination guidelines reduce total costs of rabies prevention. Intradermal administration of rabies vaccination on a large scale can further reduce total costs of pre-exposure prophylaxis.
- Strategies with increased vaccination uptake lead to fewer rabies immunoglobulin administrations and fewer vaccinations after exposure but at higher total costs.

5.Q. Workshop: Health workforce meets HSR: Tackling regional inequalities in health service provision

Organised by: EUPHA (HSR), EUPHA (HWR)
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Background:

Many countries across Europe are facing considerable challenges in providing accessible and high quality care regardless of where people live. A major element is the difficulty that countries face to attract and retain health care professionals to work in remote and rural areas. This applies to primary care services as well as to hospital care, and to the care provided by physicians and other health professionals, including nurses. A widely shared question is therefore how to safeguard access to health care in rural areas and to solve recruitment and retention problems in such regions, both of medical and nursing staff. The workshop will build on last year's joint workshop of the Sections on HSR and HWR that ended with questions related to how to organize accessible and equitable health services including the workforces required to do so.

Objectives:

This workshop will provide a snapshot of studies from across the European region, with a particular focus on differences between rural and urban health care practices and the types of solutions being used to reduce regional disparities in provision of care. This often refers to retention and recruitment strategies, but the session will also address other types of solutions in the organization of care that can help ensure accessible care, including in vulnerable regions and settings. Tackling this challenge will therefore require a joint approach, tapping into experience from health workforce research as well as wider health services research, bringing together research into the organization and management of healthcare and into the health human resources providing this care, operated from different angles and being informed by different research traditions and data sources. Based on statements, we will discuss the topic of how to organize accessible and equitable health services including the workforces required to do so after the presentations.

Key messages:

- Workforce policies should focus on retaining primary care workforce in rural areas and integrated policies should attract new primary care practices.
- Both in primary care and hospital care new solutions are being sought which should help resolve regional differences in access to care and attractiveness for the health workforce.

Rural and urban general practice: a comparison in 34 countries

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Background:

Rural areas have problems in attracting and retaining primary care workforce. Comparable problems but with a different background occur in deprived urban areas. Here we focus on primary care practices that do work in rural areas and not on the shortage or lack of access for the rural population. We answer the question whether these practices have a different organisation, lack resources and have different service profiles, compared to practices in semi-rural and urban areas.

Methods:

We used data from the QUALICOPC study, conducted among approximately 7,000 GPs in 34 (mainly European) countries, on the organisation of practices, their human resources and equipment and their service profiles. Data were analysed using multilevel regression analysis, with countries and GPs as levels.

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Results:

In general the practices in rural areas are more often single-handed and have less other primary care workers available. In most countries they have more equipment and their service profiles are broader, in particular as compared to inner-city urban practices.

Conclusions:

The combination of increasing demand for care and under-supply of health care services can lead to a primary care shortage in rural areas. However, the practices that are currently located in rural area in most countries seem to be able to cope with the situation by providing a broader range of services, compared to service-rich urban areas. Against growing health needs of an ageing and often poorer population, there is a risk of lack of facilities and equipment and ageing staff. Until now this is not manifest in the primary care practices in most countries.

Regional shortages in a small country: how to provide the right care in the right place?

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Background:

The Netherlands, though being a relatively small and densely populated country, is faced with a similar challenge as other countries in terms of regional differences in access to care and attractiveness for care workers to build their careers. Both in primary care and hospital care new solutions are being sought which should help resolve these growing difficulties.

Methods:

We conducted a literature review, survey and registry analysis, and held interviews with key stakeholders.

Results:

Substantial differences exist between regions in the supply of both primary care and hospital care doctors. Particular and less populated regions appear to be hit in multiple ways, both with an extra ageing population requiring more care as well as by limited attractiveness for both primary care and hospital care workers. Solutions being used so far are mostly initiated by individual health care settings, such as strategic personnel management, redistribution of tasks and campaigns to increase the inflow of staff. Increasingly, solutions are also being explored at regional level, including a growing emphasis on regional collaboration, both in providing the right care in the right place as well as in terms of joint recruitment strategies. Still, such approaches only have a limited effect as a result of which new approaches are needed.

Conclusions:

Strategies to improve the attractiveness of particular regions are now often fragmented, both between types of professions and sectors and different regions. In addition, innovative and new solutions appear to be hampered by vested interests of stakeholders. If new solutions are to be developed it is key that stakeholders are willing to compromise, be it when it comes to the autonomy of health care professionals and their associations and to the financial commitments required from government and insurer side.

eHealth solutions to regional shortages in the health workforce

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Background:

Healthcare systems are facing significant challenges, from demographics, shortage of health professionals to increasing costs that are associated with increasing demand. New technologies are thought to be a solution to these problems. However, the question is if the digitalization of healthcare will mitigate these problems and the shortage of health professionals in Europe.

Methods:

This study provides a scoping review on existing health digital services aiming to cope with health professional shortage in Europe. The main challenges, from workforce performance, services quality, patient-interaction to technology use are addressed. The databases of Pubmed and Ebsco were searched.

Results:

38 papers were selected and analysed addressing eHealth with impact on the workforce performance. It highlights the challenges associated with the digitalization of healthcare, the implementation of digital services, considering the design online service, and the impact of digitalization on healthcare workforce performance. An overview of the major effects of transformative technologies (e.g. eHealth services, Internet of Things solutions, Artificial Intelligence) on the healthcare workforce are addressed. Moreover, what are the major implications of technological change for future skill needs and competences of the public health workforce? Are there any reliable projections on how technologies will change the structure of the labour market for health professionals? And to what extent is the workforce equipped to adapt to the changes?

Conclusions:

Proper digitalization of healthcare will enable changes in the paradigm of healthcare delivery as well as in the mechanism for patients' participation and engagement. Sustainable implementation of eHealth is an important opportunity to address health workforce shortage but it is not enough.

6.A. Ferenc Bojan: young investigator award session

Health coach online - health benefits on the citizens terms

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In Sweden, we know that half of the women and two thirds of the men have one or more unhealthy lifestyle habits. We also know that 90% of all diabetes type 2, 80% of all heart attacks and 30% of all cancer can be prevented, if one has a healthy lifestyle. Consultative conversations have been proved very helpful while changing ones habits. The lifestyle habits of Swedes are similar to those of other countries in Europe, and by making our research available and the concept known to other countries, the overall health in Europe can improve.

In August 2017 an online practice opened in a county in south west of Sweden, were we performed lifestyle interventions with people who applied and needed it. The practice specialized in eating habits, physical exercise, alcohol and tobacco use. We have 4-6 consultative meetings during 3 to 4 months, where we help our clients set realistic goals to reach, that work in their day to day life. While using coaching techniques and motivational interviewing, we have met over 200 people, and helped improve their lifestyle.

We have seen that in regarding to self-assessed health (1-10), our clients score is higher after both completed health coaching and a year after completed coaching than at start. Calculating QALY, we can see that the impact the coach makes on our clients is cost effective and one person being coached saves the amount in hospital costs that we can use to coach 30 more.

We have learned that online meetings are more cost effective and practical for this type of concept. Our clients feel more relaxed and open to the process at a location of their choosing and it saves time for them, time they might not have taken otherwise - therefore, we can help more people. Meetings online enables us to reach all over the Västra Götaland region, and not only the close proximity where the coaches are located.

Key messages:

- Online health coaching supports our health care and helps the citizens to improve their lifestyle habits and their overall health.
- The online method is cost effective and it saves money for both health care and society.

Egg consumption and risk of total and cause-specific mortality in a Mediterranean population

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Background:

The relation between egg intake and health outcomes is controversial. We aimed to evaluate the association of egg consumption and risk of mortality in a large sample of an adult Mediterranean population.

Methods:

We prospectively analyzed 22,849 men and women aged $\geq$35 y, recruited within the Moli-sani Study (2005-2010). Dietary data were collected by the EPIC food frequency questionnaire, egg intake was expressed as g/d and used as ordered quintiles. Hazard ratios (HR) with 95% confidence interval (95%CI) were calculated by multivariable Cox-regression and competing risk models.

Results:

Over a median follow up of 8.2 y, a total of 1,237 deaths were ascertained. Mean weekly intake was 1.8 eggs (13 g/d) and regular consumers (27 g/d corresponding to more than 2 eggs per week) were more likely to report less risk factors (e.g. history of cardiovascular disease, diabetes, smoking habit). After adjustment for possible confounders, eating eggs >2 times/week) was associated with increased risk of all-cause mortality (HR = 1.21; 95%CI 1.02-1.44 for Q4 vs Q1) and coronary heart disease/cerebrovascular mortality (HR = 1.51;1.04-2.18, for Q4 vs Q1) in a non-stepwise manner; eating more than three eggs per week increased risk of cardiovascular mortality by 33% (HR = 1.33;95%CI 1.00-1.76 for Q5 vs Q1), while no association was found with cancer death or mortality for other causes. Dietary cholesterol explained up to 37% of the excess of CVD mortality risk associated with the highest egg intake (>3 eggs/week).

Conclusions:

Regular egg intake (>2 times/week) was associated with increased risk of CVD mortality in a general Mediterranean population, and part of this association was likely due to its cholesterol content.

Key messages:

- Eating egg regularly is not associated with health benefits, rather it appears to increase CVD mortality risk.
- High dietary cholesterol content is likely to be on the pathway between egg intake and increased CVD mortality.

Nutritional quality of food consumed (graded by the FSAm-NPS / Nutri-Score) and mortality in Europe

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Background:

Unhealthy diets are major contributors for non-communicable diseases (NCDs) and related deaths. To help consumers make healthier food choices, political authorities are considering implementing a simple label to reflect the nutritional quality of food products. The Nutri-Score, based on the nutrient profiling system of the Food Standards Agency (FSAm-NPS), was chosen by several countries in Europe (France, Belgium, Spain). Yet, its implementation is only voluntary per EU regulation. Scientific evidence is therefore needed regarding the relevance of the FSAm-NPS at the European level. Hence, our objective is to study how the nutritional quality of foods consumed graded by the FSAm-NPS relates to NCDs-related mortality in European populations.

Methods:

Our prospective analyses included 501,594 adults from the EPIC cohort (1992-2015, median follow-up: 17.2y). Usual food intakes were assessed with standardized country-specific methods. The FSAm-NPS was calculated using the 100g content of each food in energy, sugar, saturated fatty acid, sodium, fibres, proteins, and fruits/vegetables/legumes/nuts. Multi-adjusted Cox proportional hazards models were computed.

Results:

The consumption of foods with a higher FSAm-NPS score (lower nutritional quality) was associated with a higher risk of mortality overall (n = 50,743 events: HRQ5vs.Q1 = 1.06 [95%CI: 1.02-1.09], P-trend<0.001) and by cancer (n = 21,971 events: HRQ5vs.Q1 = 1.06 [1.01-1.11], P-trend = 0.003), respiratory diseases (n = 2,796 events: HRQ5vs.Q1 = 1.33 [1.16-1.52], P-trend<0.001) and cardiovascular diseases, although more weakly (n = 12,407 events: HRQ5vs.Q1 = 1.05 [0.98,1.11], P-trend = 0.04).

Conclusions:

In this large multinational European cohort, consuming foods with a higher FSAm-NPS score was associated with higher mortality, supporting the relevance of the FSAm-NPS to grade the nutritional quality of food products for public health applications (e.g, Nutri-Score) to guide the consumers towards healthier food choices.

Key messages:

- The consumption of food products with a lower nutritional quality as graded by the FSAm-NPS score was associated with higher mortality in the large multinational European EPIC cohort.
- This adds support to the relevance of the FSAm-NPS to grade the nutritional quality of foodstuffs for public health applications (e.g. Nutri-Score label) to help consumers make healthier food choices.

Consumption of ultra-processed foods and the risk of overweight, obesity, and weight trajectories

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Previous epidemiological studies found associations between the consumption of ultra-processed foods (UPF) and the risk of obesity-related outcomes. The aim of this study is to investigate the associations between UPF consumption and the risk of overweight and obesity, and weight trajectories, in in the French large scale NutriNet-Santé cohort.

Methods:

Overall, 110260 participants aged at least 18 years from the French NutriNet-Santé cohort (2009-2019) were included. Dietary intakes were collected using repeated 24h dietary records, merged with a food composition database of 3300 different products, categorized according to their degree of processing by the NOVA classification. Associations between UPF intake and risks of overweight and obesity were assessed using Cox proportional hazard models. Associations between UPF intake and weight trajectories were assessed using linear mixed models for repeated measures with random slope and intercept.

Results:

UPF intake was associated with a higher risk of overweight ($n = 7063$ incident cases; hazard ratio for an absolute increment of 10 in the percentage of ultra-processed foods in the diet $= 1.11$ (1.08-1.14); $P < 0.0001$) and obesity ($n = 3066$ incident cases; $HR = 1.09$ (1.05-1.13); $P < 0.0001$). Higher consumers of UPF (4th quartile) were more likely to present an increase in body mass index over time ($\beta = 0.04$, $P < 0.0001$). These results remained statistically significant after adjustment for several markers of the nutritional quality of the diet (fruits and vegetables and sugary drinks consumption, intakes of saturated fatty acids, sodium, sugar, dietary fiber or Healthy/ Western patterns) and after a large range of sensitivity analyses.

Conclusions:

In this large observational prospective study, higher consumption of UPF was associated with a higher risk of overweight and obesity. Public health authorities in several countries recently started to recommend privileging unprocessed/minimally processed foods and limiting UPF consumption.

Key messages:

- The consumption of ultra-processed food is associated with an increased risk of overweight and obesity. As the French Public Helath agency recommends, their consumption should be limited.
- Nutritional composition, food additives, contact materials, or neoformed contaminants might play a role in these associations and further studies are needed to understand their relative contribution.

Relationship between sleep patterns and multimorbidity in the Canadian Longitudinal Study on Aging

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Background:

Sleep difficulties are an unmet public health problem, affecting large segments of the population around the world. Poor sleep quality and reduced sleep duration impact over half of older adults and are associated with adverse health outcomes like multiple chronic diseases (multimorbidity) and reduced longevity.

Methods:

A cross-sectional analysis of the Canadian Longitudinal Study on Aging (CLSA), a national health survey of community-dwelling adults and older adults. A total of 30,011 participants had physiological and psychosocial data collected at baseline. Sleep measures included self-reported sleep duration (short: <6 hours, normal: 6-8 hours, long: >8 hours) and sleep quality (dissatisfied/very dissatisfied, neutral, satisfied/very satisfied). To capture multimorbidity, a primary definition was operationalized with 17 chronic conditions, whereas a secondary definition was operationalized with 9 chronic conditions to capture both the primary care and public health perspective.

Results:

In our sample, 50.9% were female (average age: 62.7 years) and 49.1% were male (average age: 63.2 years). The majority reported a normal sleep duration and approximately half reported being either satisfied or very satisfied with sleep quality. About 70% were living with multimorbidity using the primary care definition (females: 71.7%; males 64.3%), while about 30% were living with multimorbidity using the public health definition (females: 34.8%; males: 28.9%). The adjusted analyses indicated the odds of multimorbidity increased for those who reported short or long sleep duration, as well as dissatisfaction with sleep quality, across age groups and both females and males.

Conclusions:

Disrupted sleep may be an additional behavioural risk factor for a number of chronic diseases, in the context of aging populations. It is necessary to understand the potential impact of sleep on the risk of multimorbidity, and this research will build knowledge in this important area.

Key messages:

- This research will utilize a national health survey to examine and report the characteristics of sleep quality and sleep duration among approximately 30,000 community-dwelling adults in Canada.
- This research will explore relationships between sleep duration, sleep quality and multimorbidity (controlling for confounding factors) among community-dwelling adults in Canada.

6.B. Health of refugees in Europe

Difference in access to health care for newly arrived refugees in Germany: a natural quasi-experiment

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Background:

Providing quantitative evidence on structural access barriers to health care for newly arrived refugees constitutes a challenge due to a lack of suitable data. The coexistence of two different local access models in Germany allows for a comparative analysis of the association between access policies and realized access. Our study compares these two models to establish whether they lead to differences in access to care among refugees.

Methods:

Municipalities in Germany's largest federal state of North Rhine-Westphalia (NRW) have implemented different access models to which refugees are quasi-randomly assigned. We recruited 6 municipalities of which 3 decided to implement the health care voucher (HcV) model and 3 the electronic health card model (eHC) in a natural quasi-experimental study design. Analyses were based on claims data collected from the welfare offices or the statutory health insurance. We compared standardized incidence rates (SIR) based on 3 indicators: emergency service, ambulatory sensitive hospitalization and use of specialized care.

Results:

We included data on health care use of all recently assigned refugees in the 6 municipalities over a period of 7 quarters (2016/17). The average quarterly sample size is n = 9,077 which corresponds to 6.5% of the population of recently assigned refugees in NRW at that time. We find differences in realized access between the models. For emergency care, the SIR differ significantly between municipalities using the HcV model (SIR:1.88; 95%-CI: 1.62-2.18) and eHC model (SIR:1.33; 95%-CI: 1.14-1.55).

Conclusions:

Local decisions regarding the organization of access to health care are associated with differences in realized access to health care of refugees in NRW. The implementation of the eHC model may contribute to a decrease of emergency service. Further analyses should attempt to reduce a possible (self-)selection bias of municipalities which might have led to an underestimation of the difference between models.

Key messages:

- The organization of health care for newly arrived refugees on the local level is decisive for their access to care.
- Local policy makers may use their scope for action to remove access barriers for newly arrived refugees.

Explaining healthcare among unaccompanied minor refugees: a realist review

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Introduction:

Existing research on psychosocial care of unaccompanied minor refugees (UMRs) mainly focusses on socio-epidemiological accounts and qualitative evidence from the perspective of experts in the field of psychosocial care. In contrast, knowledge concerning differing context factors as well as underlying mechanisms of current healthcare barriers, which could inform policy recommendations, are rather scant.

Methods:

To synthesize scientific evidence and gray literature dealing with the field of psychosocial healthcare of UMRs, a realist review (RR) was conducted following six methodological steps of RAMESES publication standards for realist synthesis. Based on a iterative search of keywords ''UMR'', ''UMF'', ''UMA'' and ''mental health care'' in electronic databases PubMed, GBV and Web of Science we gained access to 974 texts from 2005 to 2019. Screend studies and reports were systematically reviewed according rigor and relevance, which included n = 53 documents for realist synthesis with theory-informed context-mechanism-outcome configurations (CMOs).

Results:

UMRs have a high prevalence risk for posttraumatic stress disorders and they face manifold institutional, cultural, ethical, juridical, and language-based barriers of care. A dominant and multiple CMO highlight residence status (C1), which limits access of UMRs to healthcare (M1) and produces psychosocially related mental health outcomes (O1). Residence status (C1) may also trigger mechanisms of structural or at least perceived discrimination (M2), which mediates undersupply of UMRs (O2).

Conclusions:

The inclusion of lay perspectives and an intersectional approach could inform health services research and practitioners. The reflection of UMR's social positions between categorical constructs of resilience and vulnerability, discriminatory discourses of othering, and restrictive health policies may guide policy recommendations to potentially reduce persistent disadvantages.

Key messages:

- The inclusion of lay perspectives and an intersectional approach could inform UMR related health services research and practitioners.
- The reflection of UMR's social positions (between categories, discourses, and health policies) may guide policy recommendations to potentially reduce persistent disadvantages.

Contraceptive use among undocumented migrant women seen by Médecins du Monde in the Humanitarian Hub

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In order to address the growing needs of the undocumented migrant population living in the Maximilian Park in Brussels, Médecins du Monde and 8 other organisations created The Humanitarian Hub in January 2018 where migrants can access medical care among other services. From January to February 2018, only 5 women out of 1483 patients visited The Humanitarian Hub regarding sexual & reproductive health and none asked about contraception. In response, a voluntary demedicalized midwifery clinic was implemented to build trust with the women and offer them contraception.

At our field teams' request, operational research was conducted. We used a mixed methodology, including retrospective quantitative analysis of patient files and field observations made during participant observation sessions. These observations helped us better understand the barriers women face in accessing contraception and how migration complicates its usage.

By implementing gender-sensitive consultations, the number of women patients rose from 5,4% to 10,6% in 2018. Between March 2018 and March 2019, 144 women consulted midwives regarding their sexual & reproductive health. Quantitative analysis on pre-exposure contraception on 52 files showed that 4 used a contraception, 25 women requested one, 4 refused it, 19 discussed it with the midwife, and among them, 8 agreed to try it. The most common reasons for the 80 consultations analysed were requesting contraception (62,5%), including morning-after pills (12,5%) and fear of pregnancy (32,5%). The most common contraceptive method was the pill (63,6%) followed by injections (30,3%).

Our medical team saw 29 women with unwanted pregnancies, which confirms the importance of focusing on contraception options for migrant women, although addressing this may be difficult in medical consultations. It also supports the need to implement demedicalized midwifery consultations to facilitate sensitive discussions with migrant women.

Key messages:

- Our research shows that contraceptive use is a particularly sensitive challenge in the irregular migrant women population due to the particularities of their lives.
- The development of demedicalized midwifery consultations helps professionals give irregular migrant women feasible advice on contraception in regard to their unique situations.

Injuries of adult asylum seekers in Finland: results of the 2018 TERTTU-health and well-being survey

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Background:

Injuries in refugees and asylum seekers result of accidents, violence or most extremely torture. Research in Finland has shown that many refugees experienced major traumatic events in their former home country, incl. permanent injuries. Our study provides new evidence on asylum seekers, a scarcely studied group.

Methods:

Data was collected by structured face-to-face interviews. Healthcare staff asked adult participants if they had a bodily injury or scar. If yes, they pointed the location on a pictogram. Interviewers inquired if the injury was accidental or result of violence and if it happened before or during the fleeing trip. Injuries were classified as head (incl. brain) injuries, injuries of torso/extremities or other body areas.

Results:

About half (47, 2 %) of 779 adults reported injuries, men more often than women (55,1 % vs. 35,3 %). Frequency was highest in 18-29-year olds. Close to all respondents (94 %) sustained injuries prior to their journey. Over one in five attributed injuries to accident (men 27 %, women 16 %). 16,6 % reported the torso/extremities as injury location, while 9,4 % had head injuries. Violence was cause of injury in over one fourth of cases (28 %). Every third male and every fifth female were violence victims, with no significant age difference. In both genders odds of violence exposure was highest in asylum seekers from sub-Saharan Africa - over 50 % attributed injury to violence. Violence victims had injuries of torso/extremities in 20,5%, and of the head in 15,3%. Head injuries were more frequent in > 40 year-old violence victims of both genders.

Conclusions:

Injuries are common among adult asylum seekers in Finland. Prevalence of violence induced injury, especially in sub-Saharan Africans, is alarming. Training in violence victims' management is required for professionals receiving asylum seekers. Information on injury severity and functional ability is needed for full impact assessment and service planning (incl. rehabilitation).

Key messages:

- Injuries are common among adult asylum seekers and often a result of violence, thus requiring of receiving services' professionals skills and knowledge in violence victims' management.
- Health examination protocols of asylum seekers should include injury severity assessment and impact on functional ability.

Health of asylum seeker children in Finland: a total population health examination survey (TERTTU)

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Background:

There is scarcity of representative population-based data on the health and wellbeing of asylum seekers in Europe, especially children and adolescents. The Asylum Seekers Health and Wellbeing Survey (TERTTU) was launched to inform evidence-based policy-making and development of services.

Methods:

A sample of all first-time asylum applicants was drawn from the Finnish Immigration Services electronic asylum database. Data on 303 children aged 0-17 years was gathered with a standardised health examination (including a dental assessment for 7-17 year-olds) and face-to-face-interview including the Minimum European Health Module and somatic and behavioural symptoms over the past 30 days. Guardians of 0-12 year-olds were interviewed, 13-17 year-olds responded themselves. Participation rate was 72%.

Results:

62% (95% CI 49,4-73,0) of 13-17 year-olds have had their growth and development monitored compared with 91% (95% CI 83,6-95,6) of 7-12 year-old and 86% (95% CI 79,4-91,0) of 0-6 year-olds. Long-standing health problems were more common among 13-17 year-olds (28%, 95% CI 18,2-39,7) and 7-12 year-olds (25%, 95% CI 16,8-34,2) compared 0-6 year-olds (13%, 95% CI 8,2-19,5). Sleep disturbances were more common among 13-17 year-olds (35%, 95% CI 24,2-47,4) and 7-12 year-olds (28%, 95% CI 19,6-37,5) than 2-6 year-olds (18%, 95% CI 11,3-26,7). Approximately fifth of children aged 7-17 years and slightly more than tenth of younger children had fears and anxieties. Signs of dental caries were found in 46% (95% CI 35,4-55,9) of 7-12 year-olds and in 23% (95% CI 14,1-35,1) of 13-17 year-olds.

Conclusions:

Timely and accurate assessment of healthcare needs is crucial to support and improve the health and wellbeing of children and adolescents. Survey data will be used for developing the national initial health assessment protocol for asylum seeking children and adolescents.

Key messages:

- The TERTTU Survey is the largest population-based health examination survey among newly-arrived asylum seeking adults, adolescents and children in Europe, allowing for examining family units.
- Health information on asylum seeking children and adolescents in Finland, is relevant for service development, also for other European countries.

Chronic pain and migration-related factors among Syrian refugees: a cross-sectional study

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Background:

Refugees display high rates of chronic pain. However, the relationship between refugee-related exposures introduced along their migration trajectories and the development of chronic pain remains unclear. The aim of this study was to assess the impact of stressors induced at various migration stages on chronic pain in Syrian refugees.

Methods:

This is a cross-sectional survey among adult Syrian refugees in Lebanon and in Norway. We conducted logistic regression to study the associations between chronic pain and migration-related factors experienced prior to or during flight (trauma exposure, migrating alone and detainment) and after arrival in a new country (legal status, social relationships, living conditions and access to health care).

Results:

Altogether 827 Syrians participated (response rate 85%). The mean age was 33 years and 41% were women. The overall prevalence of chronic pain was 30%. The mean WHO Quality of Life (WHOQOL) domain scores for both social relationships (13.4) and environment (10.2) were significantly lower among those reporting chronic pain, with low scores indicating less satisfaction. Regression analyses revealed an association between chronic pain and exposure to trauma (adjusted odds ratio (AOR) 2.5 (1.8; 3.4)), but no clear association between chronic pain and migrating alone or history of detention. Poor social relationships (AOR 1.9 (1.2; 3.1)), poor support from friends (AOR 1.5 (1.0; 2.1)) and poor living place (AOR 1.4 (1.0; 2.0)) were associated with reporting chronic pain, although associations reduced when adjusting for traumatic experiences. The associations between chronic pain and poor economy (AOR 1.6 (1.1; 2.5)) and poor access to health care (AOR 1.5 (1.0; 2.1)) persisted after trauma exposure adjustment.

Conclusions:

We found a strong relationship between trauma exposure and chronic pain. Further, perceived poor economy and poor access to health care were associated with chronic pain regardless of trauma history.

Key messages:

- Trauma exposure, perceived poor economy and poor access to health care are associated with chronic pain among Syrian refugees.
- Public health care interventions should consider the combined impact of risk factors throughout the migration trajectory.

Antonovsky meets Honneth or: The sense of coherence and intersubjective forms of recognition

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Persons who flee their home country are confronted with innumerous stressors. The action research project PAGES (Participation and Health Literacy of Asylum Seekers and Recognised Refugees in Salzburg) asked how their subjective health can be supported - despite experiences of uncertainty and inactivity in the asylum process. In the two yearlong accompanying qualitative research the project investigated into the role of participation, consistency and un-der/overload balance - as defined by (Antonovsky 1979, 1987) - for the well-being of 20 refugees from Syria, Iran, Iraq, Afghanistan, Pakistan, Somalia and Venezuela, aged between 17 and 58 (two thirds thereof were women). The analysis of empirical data showed that the subject-oriented dimensions (Antonovsky 1979, 1987) need to be complemented by intersubjective forms of recognition. First, findings stress the importance of support by ‘‘legitimate others’’ (e.g. social workers) in order to develop a sense of manageability, only briefly mentioned by Antonovsky (1987). Second, the experience of emotional closeness (Shagy/Antonovsky 2000, sphere of love in Honneth 1995) is essential for a person’s well-being, which is often hindered by isolation in refugee camps, relationships under distress or denied family reunification. A third crucial intersubjective dimension is legal recognition and the protection of one’s human dignity (Honneth 1995), which is often violated by racism and other forms of discrimination. Fourth, refugees seek the opportunity to rally for social esteem for their capacities and particularities (Honneth 1995), which is - at least in Austria - hindered by the denial of access to educational institutions and gainful work.

According to these findings, health promotion for refugees in welcoming countries needs to enable positive life experiences regarding participation, comprehensibility, manageability/support by ‘‘legitimate others’’ and emotional closeness, legal recognition and social esteem.

Key messages:

- For a deeper understanding of salutogenesis, the subject-oriented elements of the sense of coherence (Antonovsky 1987) need to be complemented by intersubjective forms of recognition (Honneth 1995).
- Health promotion means enabling experiences of participation, comprehensibility, manageability as well as support by ‘‘legitimate others’’, emotional closeness, legal recognition and social esteem.

Contexts between mental health of fledged people and compassion competence in the care

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The aim of this doctoral thesis is to investigate the extent to which the competence compassion has a positive influence on the mental health of refugees. The research question was raised in a first step by means of a questionnaire by Mohr & Müller, ‘Depression tendencies in the non-clinical context’. Eighty asylum seekers were questioned in a total of seventeen lodgings. In addition, a survey was conducted with employees and volunteers in refugee care. This survey included 102 people who were assessed using the standardized BOSS1 Burnout Screening Scale. With the help of the Santa Clara Briefing Scale, the differences in the population between people who are not volunteering and those who volunteer in refugee care are being investigated through an online survey. There were 818 people attending. The evaluation of the data showed that the competency compassion lowers the depressive tendencies among the refugees and they have a more positive sense of integration and hope for a better life. The competency of compassion reduces burnout factors and people who have committed themselves voluntarily have significantly higher values in compassion competency. Thus compassion can be confirmed as a valuable competence in refugee care, not only among the refugees, but also among employees and volunteers.

Key messages:

- The present study has shown that empathy skills reduce depressive tendencies in people who have escaped.
- Associations of compassion and low burnout factors confirmed by the study showed that persons with high compassion skills have low burnout scores.

6.C. The impact of digital technologies on health management

The impact of Internet use on mental wellbeing and health behaviours among persons with disability

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Background:

Disability is frequently related to the digital divide. However, the Internet may be also an opportunity for many people with disabilities, especially for those who suffer from difficulties in involving in social activities. For some of them, it is also a tool for undertaking professional tasks. The aim of the study was the assessment of the impact of the Internet on selected aspects of psychological wellbeing and undertaking health behaviours in persons with disabilities.

Methods:

From the data set of the biannual Social Diagnosis survey, data of respondents confirming the status of disability were extracted. They were used for the development of multivariate logistic regression models for self-assessment of life, the prevalence of suicidal thoughts, feeling lonely, the use of psychological support and health behaviours. The impact of Internet usage was adjusted for sociodemographic variables. Weights provided by the study team were used in the analysis.

Results:

The responses from 3231 respondents were used in the analysis. There were 33.1% of Internet users in the study group. Respondents with a mild disability made 25.3%, with moderate 39.4%, with severe 24.2%, and without an established degree of disability 11.1%. Logistic regression modelling revealed that Internet users more frequently assessed their lives as happy (odds ratio, 95% confidence interval (OR, 95%CI): 1.40, 1.13-1.75) and undertook some form of physical activity (2.32, 1.84-2.91). They also less frequently excessively consumed alcohol (0.51, 0.33-0.80). No relation was found for experiencing loneliness (0.89, 0.71-1.12), suicidal thoughts (0.998, 0.77-1.29), receiving psychological care (0.84, 0.62-1.14) and smoking (0.83, 0.66-1.04).

Conclusions:

Although persons with disabilities suffer from digital divide, Internet use may exert a beneficial impact on their wellbeing and favour more beneficial health behaviours.

Key messages:

- Internet access and use among persons with disabilities may be an opportunity for improved wellbeing.
- Persons with disabilities who are Internet users assess their lives as more happy and demonstrate more favourable health behaviours.

An automatic platform to monitor Web 2.0 presence of Healthcare Providers in Italy

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Background:

Healthcare providers (HP) need to involve the population to spread correct and useful health information and to gather feedback on the perceived quality of the service. Web 2.0, based on the use of Social Networks (SN), allows direct communication between the HP and the population. We built an automatic platform which monitors Web 2.0 usage by Italian public and private HP.

Methods:

For each HP the platform finds the relative website using Google searches and extracts the links to SN. For Facebook and Twitter, it retrieves one year of content and identifies common topics via natural language processing. Finally, it compares the Web 2.0 usage patterns and topics with the type of HP and geographical position.

Results:

In 2017, on 540 HP screened 97.8% had a website (309 unique sites, many HP have a common site). 37.5% of the websites had links to SN in the homepage: Youtube (YT) was the most common (74.1%), then Facebook (FB, 72.4%) and Twitter (TW, 51.7%). The presence of SN was lower in the south (OR: 0.63; $p < 0.001$) while is higher for research centers (OR: 5.12; $p < 0.001$) and private hospitals (OR: 2.12; $p = 0.004$). Local Health Trusts were the most active on FB (1.86 more posts, $p = 0.004$) but research centers had more fans RR: 5.32; $p = 0.003$) and likes per post (RR: 4.95; $p < 0.001$). On TW private hospitals had the most followers (RR: 3.35; $p = 0.002$) and likes per tweet (RR: 3.95; $p < 0.001$). The most posted topics were on healthy behaviors and organizational changes, while a lower number of posts were on healthy food and vaccines. Posts on specific pathologies information and healthy behaviors received more likes.

Conclusions:

We propose an automatic platform that monitors the internet presence of HP in Italy, helping to define the best strategies for effective health communication. We found that in the south and in the public sector the importance of this tool is less perceived, with a lower SN presence and a gap between posted topics and those appreciated by the public.

Key messages:

- We propose an automatic platform that reports and monitors the web 2.0 presence and usage by HP in Italy, helping to define the best strategies to spread effective health communication.
- In Italy the presence of SN among HP is lower in the south and in the public, while is higher for research centers. HP have to engage the population maximizing the potentiality of web 2.0.

Identifying and describing a model region to evaluate the impact of telemedicine

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Background:

Telemedicine solutions providing patient-centered care over distance need to be integrated into the regional setting. The acceptance by both providers and patients hat to be continuously evaluated using methods of participatory implementation research. In controlled trials, often taking place in laboratory settings, these methods cannot be applied. In the following, research in progress is presented.

Methods:

Based on socio-demographic data, epidemiology prevalence of age-related chronic diseases and data on the value of health care provision in Saxony, Germany a model region was chosen. Then, a focus group ($n = 6$) was conducted to differentiate the results and analyze the health networks of patients. For this, network maps putting the individual in the middle and his/her sources of information and support in case of illness in concentric circles around it, were used. The focus group was audiotaped, transcribed and analyzed by two researchers using MaxQDA.

Results:

With a mean age of 47.8 years ($n = 17{,}431$), high prevalence of diabetes (>15.85 %) and hypertension (>39.1%) and an expected shortage of primary physicians in 2030, the town of Kamenz is a mirror image of the current health care challenges in rural areas of Saxony. Participants of the focus groups also stated problems in finding a primary physician or a dentist. Compensatory behavior, such as traveling large distances, relying on self-researched online diagnoses and immediately going to the emergency room for medical support was described. According to the network maps, primary sources of support in case of illness are partners and relatives, yet there is little connection between those and health care providers, as well as between different medical specialists.

Conclusions:

The results will lead to potential use cases of telemedicine to be included into a standardized questionnaire for the assessment of telemedicine readiness in the model region.

Key messages:

- Telemedicine implementation in a rural area can be studied using a participatory approach.
- Focus groups and network maps are useful qualitative methods for participatory research and can inform the design of quantitative measurements.

Health and web for women: preliminary results of "SEI Donna" survey

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Background:

In 2018, 52% of the European population use the Web to seek health information and 77% consider it a useful tool to improve their knowledge about health. The Italian survey "SEI Donna" aims to investigate knowledge, perceptions and use of the web tools in women regarding health issues.

Methods:

We used an online questionnaire to collect data including the type of online research and the degree of trust towards different sources. We also assessed health literacy (HL) and eHealth literacy scale (eHEALS) using validated tests.

Results:

Of 7291 women who completed the questionnaire, 96% (n = 7022) seeks health information online. The 33% of women follows social media groups on health. One third of sample (31%) purchased a health product online, particularly cosmetics (75%) and supplements (41%). More than one third of sample thinks that information retrieved by web improve their health (35%) and influence their habits (34%). Half of sample (52%) searched online for a second opinion after medical examination. The reason was the need of a deepening in the 67% of cases. Overall, the HL is functional in 34% of cases, marginal in 56% and low in the rest (10%). Women with low HL trust less health information reported by institutional websites than women with functional HL, respectively 73% vs 86% ($p < 0.001$) and the eHEALS score of women less trusting is lower than those trusting, 23±7 vs 28±7 ($p < 0.001$).

One third of women declares not to be able to evaluate the reliability of a website particularly women with low HL (36%) compared to those with functional HL (20%), $p < 0.001$. Women reporting not to be able to evaluate the reliability of a website have eHEALS score lower than women who indicated an institutional website, respectively 24±7 vs 28±7 ($p < 0.001$).

Conclusions:

The results confirm the large use of the web as a tool to seek health information, have a second opinion and buy health products. A good level of HL and eHEALS seem to make women more skilled in surfing the web.

Key messages:

- The results confirm the importance to put effort on strategies aiming to improve health literacy and eHealth literacy in the population.
- In the public health communication perspective, the fact that one third of women thinks that information retrieved by web improve their health and influence their habits, must be considered.

Short-term and long-term effectiveness of an e-coaching application; the INHERIT project

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Background:

Lifestyle e-coaching applications have the potential to be successful in changing people's lifestyles although it is unclear whether such support would indeed help people with lower socioeconomic status (SES). The aim of the present study, conducted within the INHERIT EU project, was to investigate the effectiveness of a lifestyle e-coaching application in increasing physical activity (PA) in lower SES groups and whether such an increase is sustained after its prolonged use.

Methods:

A two-site (Greece: N = 105, Netherlands: N = 89), two arm [Greece: 50 (experimental) and 55 (control), Netherlands: 45 (experimental) and 44 (control)], parallel group, randomized controlled trial proceeded in three phases over 19 weeks, comparing PA (as measured by the IPAQ questionnaire) of participants using a lifestyle e-coaching application with participants not using any such application. Inclusion criteria involved participants to be in low SES, have an age of 18-65 years and an estimated level of physical activity of less than 210 minutes/week, while they needed to possess a smartphone, willing to install the application and being fluent in Dutch or Greek.

Results:

Results showed that the use of the app significantly improved participants' PA in both countries, at 6 (Greece: $p = 0.015$, Netherlands: $p = 0.003$) and 19 weeks (Greece: $p = 0.002$, Netherlands: $p < 0.001$), while the effect was even higher for low physically active participants as measured at baseline, after both time periods. Compared to the control group, after adjusting for several characteristics, the experimental group achieved a better improvement of PA at 19 weeks compared to baseline ($p = 0.006$) and week 6 ($p = 0.007$).

Conclusions:

Positive effects on participants' PA after 19 weeks were observed, with the findings suggesting that the longer the application is used, the greater the improvement of PA, while the effect was more obvious among those following a sedentary lifestyle as measured at baseline.

Key messages:

- E-coaching applications could be useful in promoting physical activity among people from low SES.
- E-coaching applications are cost effective and environmentally friendly methods of promoting physical activity. Uptake by national health systems should be examined further.

6.D. Round table: Measuring values: enhancing how WHO monitors and reports on health and well-being

Organised by: WHO EURO
Chair persons: Nick Fahy - UK
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Many concepts that are key to public health policy-making are conceptual and often values-based. How such concepts can be implemented by Member States, and how the effectiveness of this implementation can be measured and reported, remains an critical challenge that all major monitoring frameworks are faced with, from Health 2020 (WHO's European policy framework for health and well-being), to the Sustainable Development Goals for Agenda 2030.

In 2016, WHO established a project to interrogate how four key values-based public health concepts can be better measured and reported on, to increase the accountability of Member States towards these concepts. Based on the priority areas of Health 2020, the concepts which were chosen are:

- resilience;
- empowerment;

- life-course approach; and
- whole of society approach.

Four Health Evidence Network (HEN) synthesis reports were commissioned from leading experts and have now been published, synthesizing the best available evidence and grey literature on these concepts, and proposing a variety of quantitative and qualitative approaches to measuring them.

The workshop will be organized as round table workshop. It will bring together the authors of all four reports to provide an overarching thematic discussion on how to enhance the monitoring and reporting of values-based public health concepts. In addition, it will also present an opportunity to discuss the findings of the reports, in particular how qualitative evidence can be deployed to make up for the shortcomings of quantitative indicators. The role of culture in informing these values-based concepts will also be discussed.

The session will be chaired by Nick Fahy, who will set the scene and provide some background to the WHO Europe project on enhancing monitoring and reporting. Jane South will then give overview of the HEN synthesis report on measuring resilience, followed Glenn Laverack, who will talk about the HEN report on measuring empowerment. Mark Hanson and Scott Greer will review their respective HEN reports on measuring the life-course approach and whole-of-society approach implementation. Each speaker will be asked to illustrate their presentation with a case study which demonstrates how qualitative evidence can enhance the monitoring and/or reporting of the various concepts.

During the discussion, a number of key questions will be discussed by the panel with input from the audience.

- How can actionable measurement strategies be derived from existing research regarding values based concepts?
- How can meaningful, country-level reporting mechanisms be expanded to include quantitative and qualitative health information and indicators?
- What is the role of cultural contexts in mediating these (and other) values-based concepts?

Key messages:

- Many key public health concepts are inherently values-based. However, this is often not acknowledged, making it challenging to monitor and report on them.
- Qualitative evidence can be key to designing more effective ways to measure the implementation of values-based public health concepts.

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6.E. Workshop: Population attributable fraction: methodologies, utilization and translations into public health messages

Organised by: International Agency for Research on Cancer (IARC), INCa, France
Chair persons: Julie Gaillot - France
Contact: jgaillot@institutcancer.fr

The aim of this session is to give an overview of the methodology, applications, and translations of studies where population attributable fraction is estimated. This session will go through the methodologies of basic population attributable fractions and also further utilization of its method beyond common application today. It will therefore go through best practices and also show case how such estimates can support assessment of prevention programs and also setting up public health messages.

Population Perception and Estimated Contribution of Lifestyle and Environmental Factors on the National Burden of Cancer in France

Isabelle Soerjomataram
International Agency for Research on Cancer, Lyon, France

Assessing the Impact of Prevention Programmes on the Future Burden of Cancer in Northern Europe

Therese Andersson
Karolinska Institutet, Stockholm, Sweden

Translating Population Attributable Fraction into Public Health Messages

Jon Shelton
Cancer Research UK, London, UK

6.F. Maternal and perinatal health

Effects of maternity waiting homes on perinatal deaths in an Ethiopian hospital. A case-control study

Sofia Zanovello

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Background:

A Maternity Waiting Home (MWH) is a residential facility located near a medical facility, where women with high risk pregnancies can await and be transferred to the medical facility shortly before delivery or earlier if a complication arise. MWH are widespread in the developing countries, to reduce the long distances to reach health facilities. The aim of this study was to investigate whether MWH was an effective strategy in reducing perinatal deaths at Wolisso Hospital in Ethiopia, from 2014 to 2017. This hospital is supported by the Italian NGO Doctors With Africa CUAMM, with a strong commitment to reduce maternal and child mortality.

Methods:

Through a case-control study, we compared perinatal mortality among women admitted via MWH and women admitted directly to the hospital. Cases were mothers who experienced at least a perinatal death before discharge. For each case, two mothers who gave birth to one or more babies alive until discharge were selected as controls. 3 groups of confounding variables were considered: maternal conditions or related to the current pregnancy, variables related to the delivery and neonatal characteristics. A regression model was built adjusting for each group. Statistically significant variables were combined in a final model.

Results:

1175 cases and 2350 controls were included. Women admitted through MWH showed a OR 0.49 (95%CI:0.33-0.71; $p < 0.000$) for perinatal mortality when adjusted for the maternal/current pregnancy conditions, and a OR 0.60 (95%CI:0.40-0.90, $p = 0.013$) when adjusted for the delivery variables. In the final model the risk of perinatal mortality for women admitted to MWH was 54% less than those admitted directly to the hospital (OR = 0.46, 95%CI:0.30-0.70; $p < 0.000$).

Conclusions:

Our results show a more than halved risk of perinatal death cases for women admitted to the hospital through a MWH in rural Ethiopia, and support the policy implemented by the government in building such structures nearby each hospital.

Key messages:

- Maternity Waiting Home is a structure near a health facility, where pregnant women at risk wait for their delivery.
- MWH is an easy and effective tool to reduce perinatal deaths in rural Ethiopia.

Breatsfeeding supression in a Spanish referral hospital (2011-17): a retrospective cohort study

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Background:

WHO recommends measuring the role of social determinants in the initiation of breastfeeding, given that they will have an impact on the health of these mothers and babies throughout their lives. The present study, the first in Spain, describes the onset of breastfeeding through maternal and pregnancy characteristics related to breastfeeding suppression with cabergoline.

Methods:

We assessed 20965 opportunities of breastfeeding initiation, collecting data of deliveries that had an obstetric clinic history record and resulted with at least one alive baby at the Hospital Clinic of Barcelona (HCB) between January 2011 and December 2017. Adjusted odds ratios for cabergoline use during hospitalization considering maternal, neonatal and pregnancy characteristics were obtained.

Results:

Adjusting for the set of variables, inhibition of lactation was significantly higher in women without or primary studies with respect to women with higher education (OR 2.5, CI95% 2.0-3.0) and living in economically more depressed areas (OR 1.08, 1.04-1.2). Breastfeeding was also more inhibited in women who did not express intention of natural birth (OR 2.3, 1.9-2.9), smokers (OR 2.2, 1.9-2.6), with more previous children (OR 1.2 for each sibling,1.1-1.3), in term versus pre-term birth (OR 1.3, 1.2-1.4), in women with multiple births (OR 1.6, 1.2-2.1) and with higher risk pregnancy (OR 1.3 per risk point, 1.2-1.4). According to the mother's country of birth, and taking Spanish women as a reference, women born in Northern Africa (OR 0.2, 0.1-0.3), in India and Pakistan (0.2, 0.1-0.3), in Eastern Europe (0.4, 0.2-0.6) and Western Europe (0.5, 0.4-0.8) are less likely to inhibit breastfeeding. Chinese women are significantly more likelier to inhibit breastfeeding (OR 7 (5.7-8.6)).

Conclusions:

Inequalities have been detected in the inhibition of lactation in puerperal women. Knowing these inequalities in breastfeeding initiation is the first step to address them.

Key messages:

- This is the first study to describe disparities in breastfeeding inhibition in puerperal women.
- Factors related to lower socioeconomic status and poor health are more likely associated with breatfeeding suppression.

Dietary patterns and gestational weight gain: evidence from the ''Mamma & Bambino'' cohort

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Background:

In 2009, the Institute of Medicine (IoM) revised the guidelines on recommended gestational weight gain (GWG), taking into account pre-pregnancy body mass index (BMI) independent of age and ethnicity. However, more than half of mothers does not meet these guidelines with adverse outcomes for themselves and for newborns. Here, we used data of 232 women from the ''Mamma & Bambino'' cohort (Catania, Italy) to investigate the association between maternal dietary patterns, pre-pregnancy BMI and GWG.

Methods:

Pregnant women were enrolled during the prenatal genetic counselling, at 4-20 gestational week. Dietary patterns were derived by food frequency questionnaire and principal component analysis. Self-reported pre-pregnancy BMI and GWG was calculated according World Health Organization and IoM guidelines, respectively.

Results:

Adherence to the ''western'' dietary pattern - characterized by high intake of red meat, fries, dipping sauces, salty snacks and alcoholic drinks - was associated with increased GWG ($\beta = 1.217$; SE = 0.487; $p = 0.013$), especially among obese women ($\beta = 7.363$; SE = 1.808; $p = 0.005$). In contrast, adherence to the ''prudent'' dietary pattern - characterized by high intake of potatoes, cooked vegetables, legumes, rice and soup - was associated with reduced pre-pregnancy BMI ($\beta = -0.651$; SE = 0.308; p-trend = 0.035). Interestingly, the adherence to this pattern was positively associated with GWG among underweight ($\beta = 4.127$; SE = 1.722; $p = 0.048$), and negatively among overweight and obese ($\beta = -4.209$; SE = 1.635; $p = 0.016$ and $\beta = -7.356$; SE = 2.304; $p = 0.031$, respectively).

Conclusions:

Our findings encourage further studies to evaluate potential preventive strategies against inadequate weight gain, including the promotion of healthy dietary habits even during the periconceptional period.

Key messages:

- Adherence to diet rich in red meat, fries, dipping sauces, salty snacks and alcoholic drinks increases GWG, especially among obese women.
- Adherence to diet rich in potatoes, vegetables, legumes, rice and soup was associated with lower pre-pregnancy BMI, increased GWG among underweight, and decreased GWG among overweight/obese women.

Tobacco smoking in pregnant women: fifty years of evolution in France

Nolwenn Regnault

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Background:

Smoking during pregnancy is a major modifiable risk factor for maternal and foetal morbidity. We aimed to describe 1/ smoking trends in France between 1972 and 2016, 2/ the factors associated with smoking cessation and reduction during pregnancy in 2016.

Methods:

French National Perinatal Surveys are routine surveys based on a representative sample of births (N = 11,733 in 2016). Data were collected in face-to-face interviews in postnatal wards and from the mother's medical record. Smoking rates before pregnancy and during 3rd trimester were estimated for each study year and characteristics associated with smoking reduction (relative percent change in number of cigarettes smoked before and during pregnancy <50% or $\geq$ 50%) compared with smoking cessation were analysed using multinomial logistic regression.

Results:

After significantly decreasing from 1995 onwards, smoking prevalence stagnates since 2010 both before pregnancy and in the 3rd trimester (30.1% and 16.2%, respectively in 2016). In 2016, 45.8% ceased smoking during pregnancy, 37.2% reduced by $\geq$ 50% their consumption and 16.9% reduced by < 50% or did not reduce at all. The more cigarettes women smoked before pregnancy, the greater this reduction was ($p < 0{,}001$). Moderate reduction (<50%) vs stopping was more frequent in multiparae compared to nulliparae (aOR = 2,47 [IC95%:1,93-3,15]) and in women with low education (aOR(<High school vs university graduates) = 7,20 [4,78-10,82]) and low income (aOR(<1500€per month/>3000€) = 2,30 [1,51-3,50]).

Conclusions:

Smoking rates were high before and during pregnancy in France in 2016. Socio-demographic factors should be considered when targeting women most at risk of continuing smoking during pregnancy.

Key messages:

- After significantly decreasing from 1995 onwards, smoking prevalence stagnates since 2010 both before pregnancy and in the 3rd trimester in France.
- Supporting female smokers of childbearing age in their attempts to quit and remain non-smokers even after pregnancy is crucial, especially in multiparae and women in poor social condition.

Monitoring Fetal Alcohol Spectrum Disorder during the neonatal period in France

Nolwenn Regnault

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Background:

Alcohol is a known teratogenic and foetotoxic agent. At birth, only the complete foetal alcohol syndrome (FAS) and at most a suspicion for some incomplete syndromic forms can be diagnosed. Yet, other Consequences of prenatal Alcohol Exposure (CAE) can also be observed and recorded in the neonatal period. Our goal was to describe the frequency of diagnosis codes for FAS and CAE at the national and regional level.

Methods:

Between 2006 and 2013, we identified the ICM-10 codes Q860 (FAS) and P043 (CAE) in the hospital records for stays occurring in the 28 first days of life in the French national health insurance database (SNDS). Our "potential Foetal Alcohol Spectrum Disorders group" (pFASD), included the FAS and CAE subgroups. The pFASD prevalence was estimated per 1000 live births at the national and regional levels overall and then comparing: 2006-2009 and 2010-2013.

Results:

From 2006 to 2013, 3207 neonates were diagnosed with pFASD during the neonatal period, i.e. 0.48 cases per 1,000 live births, including 0.07‰ of FAS. Between 2006-2009 and 2010-2013, pFASD remained stable (p = 0.6). At the regional level, the proportion of pFASD was the most frequent in one of the overseas territories (La Reunion Island, 1.22‰ births) and in the north-eastern part of mainland France (0.90 ‰ births to 1.02 ‰).

Conclusions:

This study is the first to produce a national estimate of the frequency of neonatal diagnosis of FAS. It shows a stability of the frequency of pFASD cases recorded over the 2006-2013 period which is certainly underestimated but gives a first minimal estimate of the burden of alcohol use during pregnancy in France.

Key messages:

- Alcohol use during pregnancy remains a public health issue in France.
- Estimating the prevalence of FAS is of undeniable priority given the public health implications of these disorders that hinder the development of children exposed, and their avoidable nature.

Adverse pregnancy outcomes and long-term risk of maternal renal disease: a systematic review

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Background:

Little is known about the long-term risk of renal disease following adverse pregnancy outcomes, such as hypertensive disorders of pregnancy (HDP), gestational diabetes (GDM) or preterm delivery. We aimed to investigate associations between adverse pregnancy outcomes and maternal chronic kidney disease (CKD) and end-stage kidney disease (ESKD), by synthesising results of relevant studies.

Methods:

A systematic search of PubMed, EMBASE and Web of Science was done up to July 2018. Case-control and cohort studies were eligible for inclusion if they provided original effect estimates for associations between adverse pregnancy outcomes (HDP, GDM, preterm) and maternal renal disease (primary outcomes: CKD, ESKD; secondary outcomes: renal hospitalisation, renal mortality). Two independent reviewers extracted data and assessed risk of bias. Random effects meta-analyses were conducted to determine pooled adjusted odds ratio (AOR) and 95% confidence interval (95%CI) for each association.

Results:

Of 5,120 studies retrieved, 21 studies met inclusion criteria (4,483,847 participants). HDP was associated with increased odds of ESKD (AOR 6.58, 95%CI 4.06-10.65), CKD (AOR 2.08, 95%CI 1.06-4.10), renal hospitalisation (AOR 2.29, 95%CI 1.42-3.71). The magnitude of association was dependent on HDP subtype: AOR for preeclampsia and ESKD was 4.87 (95%CI 3.01-7.87); gestational hypertension and ESKD was 3.65 (95%CI 2.34-5.67); other HDP (including chronic hypertension) and ESKD was 14.67 (95%CI 3.21-66.97). Preterm delivery was associated with increased odds of ESKD (AOR 2.16, 95%CI 1.64-2.85). GDM was associated with increased odds of CKD among black women (AOR 1.78, 95%CI 1.18-2.70), but not Caucasian women (AOR 0.81, 95%CI 0.58-1.13)

Conclusions:

Women who experience adverse pregnancy outcomes have increased odds of renal disease, especially after HDP. Risk stratification and preventive interventions may be needed to reduce the risk of clinically significant renal disease in mothers.

Key messages:

- This is the first study to summarise the long-term risk of renal disease among women who experience a range of adverse pregnancy outcomes.
- Women who experience hypertensive disorders in pregnancy, preterm delivery, or gestational diabetes are at increased odds of renal disease.

6.G. Trends in diabetes and hypertension management

The Entred 3 study: a national representative sample of people with diabetes, 3rd edition-France-2019

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Background:

In France, more than 3.3 million people are pharmacologically treated for diabetes. The 3rd edition of the Entred study was launched in 2019 in order to establish an overview of the epidemiological situation of diabetes since the last studies performed in 2001 and 2007. The main objectives are to describe and assess trends in characteristics of people pharmacologically treated for diabetes, in cost of care and clinical care pathways, in quality of care, in quality of life and in mortality and to focus on specific populations.

Methods:

A sample of 13'000 adults has been randomly selected from the two majors French health insurance systems database. Those patients are invited by their health insurance provider to answer to a short phone-based questionnaire and then to a self-administered questionnaire (mailed or by Internet). With the agreement of those patients, their physicians are suggested to answer a questionnaire to collect information concerning their clinical and biological results. A passive follow-up of the sample is implemented by extraction of participants' reimbursement and hospital discharge data from the SNDS (Système National des Données de Santé) for 20 years (the 10 years previous to and the 10 years following the sampling).

Results:

Results expected will present first rates of participation for patients and their physician. Also, a first feedback on the innovative processes of the study, collaborations between institutions and partners will also be presented.

Conclusions:

The expected results of this surveillance system based on a complementary approach (self-questionnaire, medical questionnaires and medico-administrative data) are: health status, therapeutics, economic burden, social and the quality of care pathways, the ways to improve medical practice and the quality of life of people with diabetes. Entred 3 would also be a valuable tool for orientating prevention policies that could be transposed to other countries.

Key messages:

- Entred combines data from people with diabetes, their care providers and extractions of health insurance data. This is a valuable tool for orientating care and prevention policies in diabetes.
- Entred 3 is the continuation of two previous editions and should provide important information not available in administrative database, is a major tool for all stakeholders involved in diabetes care.

Trends of diabetes-delated preventable hospitalizations in an italian region from 2006 to 2015

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Background:

Diabetes-related preventable hospitalizations (DRPHs) are indicators of primary care effective services. The aim of this study is to compute the trends of DRPHs, and to assess the risk factors for increased in-hospital length of stay (LOS) and costs in an Italian region.

Methods:

DRPHs were computed following the AHRQ definitions, which include four types: short-term complications (PQI-1), long-term complications (PQI-3), uncontrolled diabetes (PQI-14), lower-extremity amputations (PQI-16). Trends were direct standardized on in-habitants in 2006. Negative binomial regression model was used.

Results:

In the study period PQI-1 increased +426.9 %, PQI-3 +175.5%, PQI-14 +231.7% and PQI-16 decreased -26.2%. Prolonged LOS was related to type 2 diabetes ($p < 0.001$), peripheral vascular disease ($p = 0.045$), uncomplicated hypertension ($p < 0.001$), liver disease ($p < 0.001$) for PQI-1; type 2 diabetes ($p < 0.001$), uncomplicated hypertension ($p < 0.001$), complicated hypertension ($p < 0.001$) for PQI-3; type 2 diabetes ($p < 0.001$), complicated hypertension ($p = 0.001$), metastasis ($p = 0.042$) for PQI-14; female gender ($p = 0.001$), congestive heart failure (CHF) ($p = 0.001$), valvulopathy ($p = 0.024$), BPCO ($p = 0.028$), renal failure ($p < 0.001$), liver disease ($p = 0.015$) for PQI-16.Considerable factors affecting the costs were female gender ($p = 0.005$), peripheral vascular disease ($p = 0.006$), renal failure ($p = 0.050$) for PQI-1; type 2 diabetes ($p = 0.002$), arrhythmia ($p = 0.002$), peripheral vascular disease ($p < 0.001$), BPCO ($p < 0.001$), renal failure ($p < 0.001$) for PQI-3; peripheral vascular disease ($p = 0.004$), uncomplicated hypertension ($p = 0.005$), BPCO ($p = 0.011$), renal failure ($p = 0.009$), liver disease ($p < 0.001$), psychosis ($p = 0.027$) for PQI-14; CHF ($p = 0.014$), arrhythmia ($p = 0.001$), uncomplicated hypertension ($p = 0.003$), renal failure ($p = 0.008$), deficiency anemia ($p = 0.032$) for PQI-16.

Conclusions:

DRPHs has been increasing and some comorbidities need to be better managed in outpatient setting to reduce LOS and costs.

Key messages:

- This study addresses the effect of multimorbidity on the burden of diabetes-related preventable hospitalizations using administrative data from an entire italian region over 10 years period.

- This study uses Prevention Quality Indicators to measure their burden on regional public health and produces useful evidences for the improvement of diabetes management in outpatient setting.

Motivation for change, cornerstone of diabetes self-management in patients with type 2 diabetes

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Background:

Personal motivation for change plays a fundamental role in creation of sustainable changes regarding diabetes self-management. The aim of this study is to assess the motivation as well as the relation between the level of patient̀s motivation in relation to disease characteristics, metabolic control, behavioral determinants and the barriers patients encounter in diabetes self-management.

Methods:

The data for this cross-sectional study were obtained by combining anthropometric measurements (body mass index-BMI), biochemical parameters (glycosylated hemoglobin-HbA1c) and by interviewing respondents using certain subscale of a structured Personal Diabetes Questionnaire (PDQ).

Results:

The sample consisted of 117 respondents with T2DM. The majority (61.06%) was not motivated to make self-management changes. Non-motivated respondents were older than 65 years of age (X○2 = 8,046; p = 0.005) and had: a lower level of education (X○2 = 35.320; p = 0.000), diabetes for more than 10 years, poor glyco-regulation (90,14%) and were overweight / obese (81,7%). Motivated respondent were more physically active (X○2 = 6.439; p = 0.000), more adherent to anti-hyperglucemic therapy (OHAs) (X○2 = 9.673; p = 0,002), and more adherent to dietary regime. Average barrier scores: in the following healthy diet [t = -7.960; p = 0.000], in therapeutic adherence [t = -4.318; p = 0.000] and physical activity [t = -6.439; p = 0.000] were also statistically significantly different with the high impact in relation to respondents' motivation.

Conclusions:

Assessment of the motivation for changes in diabetes self-management should become an integral part of monitoring patients with T2DM in Primary Health Care (PHC). In this way, individual advisory strategies could be developed, because motivated and not motivated persons have different needs for counseling.

Key messages:

- Motivated and not motivated persons with T2DM have different needs for counseling.
- Assessment of the motivation for changes in diabetes self-management should become an integral part of monitoring patients with T2DM.

Peer support for socially vulnerable citizens with diabetes: Bridging the gap to the health system

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Problem:

Despite free universal healthcare, Copenhagen is challenged by inequality in the prevalence and implications of type 2-diabetes (T2D). To address the problem, the Municipality of Copenhagen has initiated a city action plan including a peer support program for socially vulnerable citizens with T2D. Such programs have shown to be an essential supplement to the established health system to reach groups, who have limited contact with the health system. However, research on the implementation of the programs is generally limited.

Description of the problem:

This 6-months peer support program is based on an initial analysis, showing social vulnerability to be associated with co-morbidity, low level of education, unemployment, living in a disadvantaged district and living alone. The peers are matched with a volunteer peer supporter with T2D, who helps out every 14. day with social-, practical- or bridging activities to health services or the municipality.

We aim to evaluate the implementation with focus on contextual factors. We conduct in-depth qualitative interviews with peers (N = 12), peer supporters (N = 12), and relevant stakeholders (N = 6). Further, surveys with the peers and peer supporters (N = 45).

Results:

Our preliminary results indicate how the peer supporters can bridge the gap between socially vulnerable citizens with T2D and the health system. However, contextual factors regarding the recruitment of peers have challenged the implementation process as the municipality has difficulty reaching them.

Lessons:

To ensure a successful implementation, it is important to prioritize resources to ensure good collaboration with local stakeholders, who can be gatekeepers in the recruitment and get in contact with this group of citizens.

Key messages:

- The program has potential to bridge the gap between socially vulnerable citizens and the health system.
- The group is hard to reach without collaboration with local stakeholders.

Trends by gender and predictors of diabetes-related amputations: an Italian regional analysis

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Background:

Lower extremity amputations (LEAs) are common among people with diabetes, resulting in high disability and mortality. Understanding trends in diabetes-related LEAs is important for assessing the quality of care. Aim of this study was to evaluate predictors and time trends in LEAs in a region of Southern Italy, focusing on gender difference.

Methods:

Hospital discharge records were used to identify all diabetic adult patients hospitalized for LEAs between 2006 and 2015. For each year, gender- and age-adjusted standardized hospitalization rates for major and minor amputations were calculated and time trends were analyzed by gender. Predictors of LEAs were estimated by a multivariable regression model.

Results:

In the study period, 579 major and 1345 minor amputations were performed in Abruzzo. Gender- and age-adjusted standardized admission rates decreased for minor amputations among both males (-29.96%) and females (-5.33%), whereas major amputations rates decreased only for males (-44.73%). Males were at higher risk of undergoing major (Rate Ratio [RR] 1.41, 95%CI 1.19-1.67) and minor (RR 1.62, 95%CI 1.45-1.82) amputations, but the male-to-female rate ratio decreased for major and minor amputations. Peripheral vascular disease was the main predictor of major (adjOR 4.09, 95%CI 3.31-5.06) and minor amputations (adjOR 12.90, 95%CI 11.00-

15.12). Age over 85 (adjOR 9.07, 95%CI 1.84-44.71) and more than 3 comorbidities (adjOR 2.51, 95%CI 1.75-3.60) were parameters associated only with major amputations.

Conclusions:

Reducing the number of LEAs represents a healthcare priority. This study emphasizes the existence of gender disparities in LEAs, highlighting a significant reduction of LEAs for males and a lack of improvement for females. Thus, it is worthwhile to investigate potential clinical, behavioral and healthcare-related causes of this difference, in order to plan health system changes aimed at improving care and facilitating access to health care for women.

Key messages:

- Time trends in LEAs showed a substantial improvement only for males, highlighting the existence of gender difference.
- Understanding the underlying causes is essential to improve the quality of care.

Trends in diabetes prevalence, awareness, treatment, control in Yangon, Myanmar between 2004-2014

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Background:

In 2004, a survey in Yangon Region was conducted as the first STEP survey in Myanmar, which was repeated in 2014, assessing diabetes prevalence. Whether there have been any changes over time in the awareness, treatment and control status of diabetes is not known. The study aimed to assess changes in the prevalence, awareness, treatment and control of diabetes from 2004 to 2014, among adults in Yangon region.

Methods:

The study was conducted in urban and rural areas of Yangon region, Myanmar, using two cross-sectional household based studies, in accordance with World Health Organization STEPS methodology. Men and women aged 25-74 years old participated in the studies (n = 4448 in 2004) and (n = 1372 in 2014). Logistic and linear regression were performed and outcome variables were diabetes and fasting plasma glucose.

Results:

The overall age-standardized prevalence of diabetes were 8.3% (95% CI 6.5-10.6) in 2004 and 10.2% (7.6-13.6) in 2014 (p = 0.296). The diabetes prevalence increased from 2004 to 2014 only among participants aged $\geq$60 years, from 14.6% (11.7-18.1) to 31.9% (21.1-45.0) (p = 0.009). Awareness of having diabetes increased between 2004 and 2014 (44.3% (39.2, 49.6) to 69.4% (62.9-75.2)) ($p < 0.001$). Among participants who were aware of having diabetes, the proportion under treatment had increased between 2004 and 2014 from 55.1% (46.8-63.1) to 68.6% (61.5-74.8) (p = 0.015). There were no increase between 2004 and 2014 in the proportion of participants with controlled diabetes. After adjustments for age, sex and education, mean fasting plasma glucose levels in 2014 was 0.56 mmol/l (0.26-0.84) higher than in 2004.

Conclusions:

The studies to monitor the development of diabetes prevalence in Myanmar are needed. Preventive measures to halt increases prevalence, to increase the detection rate of undiagnosed DM also treatment rate and to help people with diabetes to control their situation are needed.

Key messages:

- Mean plasma glucose levels were higher in 2014 than in 2004, but an increase in DM prevalence during this period was seen only among the oldest participants.
- The proportion of women being aware of having DM, as well as the proportion under treatment for most groups, had increased, however not the proportion under control.

Prevalence of hypertension and diabetes in Finland by different data sources

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Background:

Population level information on the prevalence of hypertension and diabetes is needed to support planning and evaluation of preventive activities and care. Population based health examination surveys (HES) can provide valid information, but they are time consuming and expensive. Administrative registers on hospitalizations and out-patient visits could provide information faster and at less cost.

The aim of this study is to estimate how comparable prevalence estimates of type 2 diabetes (T2D), hypertension and their combination are based on data from the Finnish national health examination survey (FinHealth 2017) and data from administrative hospital and primary care registers in Finland.

Methods:

Survey data were linked to care registers using personal identity codes. Survey based hypertension was defined as SBP$\geq$140 mmHg or DBP$\geq$90 mmHg or self-reported use of antihypertensive medications; and T2D as HbA1c $\geq$48 mmol/mol or self-reported us of diabetes medications. Corresponding indicators from care registers were: hypertension and T2D as a reason for care or visit or having received prescription for diabetes medication (using ICD-10, ICPC and ATC codes).

Results:

For hypertension, survey data provided the prevalence of 43 % while only 12 % of individuals were identified as hypertensives in the register data. The prevalence of T2D was 9 % in both data sources. The prevalence of having both hypertension and T2D was 7 % based on survey data and 3 % based on register data. Agreement between survey and register data was lower for hypertension (Cohen's kappa 0.23) than for T2D (0.84).

Conclusions:

Register data provided lower prevalence for hypertension than the survey data. For diabetes, similar prevalences were observed. As there are limitations in the coverage of register data more reliable population level information can be obtained from HES.

Key messages:

- Health examination surveys cover persons with undiagnosed problems and conditions omitted in national registers.
- Hypertension and T2D should be monitored with both register and survey data.

Education and hypertension in the CONSTANCES cohort: which factors mediate this association?

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Background:

Individual socioeconomic characteristics and in particular education have been shown to be strongly associated with hypertension (HTN). Few studies have examined the mechanisms involved in such associations and understanding them would help to reduce the burden of social inequalities. We aimed to investigate whether specific risk factors of HTN intervene as mediators in the association between individual education and HTN in a large sample of French adults.

Methods:

In this cross-sectional analysis, participants are adults aged between 18 and 69 years old recruited to the CONSTANCES cohort over the period 2012-2015. We included behavioral (poor diet, physical inactivity, alcohol consumption), anthropometric (body mass index) and socioeconomic risk factors (income and longest occupation) as potential mediators. Analyses were stratified by sex. Natural direct and indirect effects of education on HTN were estimated using weighted Poisson regression models with inverse odds weighting.

Results:

A total of 62,247 individuals (53% women, mean age 48±13 years) were included. Prevalence of HTN was 37.3% [95%-Confidence Interval (95%-CI) =36.6-38.0] in men and 23.2% [95%-CI = 22.7-23.8] in women. We found a steep educational gradient of HTN in both sexes, larger among young adults in relative terms. Low education was strongly associated with HTN: RRTotal Effect = 1.16 [95%-CI = 1.12-1.21] in men and 1.26 [95%-CI = 1.21-1.32] in women. Behavioral, anthropometric and socioeconomic risk factors accounted for 49% and 32% of the total effect in men and women respectively.

Conclusions:

This study underlines the importance of education in inequalities in HTN and suggests that behavioral, anthropometric and socioeconomic risk factors substantially mediate the association between education and HTN. Future research using longitudinal data should be done to help understand the causal pathway linking education and HTN.

Key messages:

- A strong gradient of decreased prevalence of hypertension with higher individual education is observed in both sexes and in early adulthood, suggesting that prevention should start early.
- Behavioral, anthropometric and socioeconomic characteristics at adulthood substantially mediate the association between education and hypertension.

6.H. Workshop: Quality strategies in European health systems: assessing their nature, use and effectiveness

Organised by: Observatory
Chair persons: Ewout Van Ginneken - Germany, Niek Klazinga - Netherlands
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Quality of care is one of the most frequently quoted principles of health policy, and is currently high up on the agenda of policy-makers at national, European, and international levels. However, the understanding of the term and what it encompasses varies. Many organizations and movements, such as evidence-based medicine, health technology assessment, provider accreditation, clinical practice guidelines and patient safety, play an important role in improving quality of health care. However, this broad field of quality-related initiatives is fragmented, and there is often a lack of awareness about parallel activities because of different labels. Evidence on the effectiveness and cost-effectiveness of different quality strategies is not always readily available for policy-makers, who have to struggle with prioritizing initiatives for investment.

To provide a solid foundation for addressing these challenges, the European Observatory on Health Systems and Policies in collaboration with the OECD has put together a comprehensive study on health care quality, its interpretation and the evidence on different strategies aiming to assure or improve it. Drawing on this 2019 study, the workshop has the following objectives:

(a) Provide an understanding of the multidimensional concept of quality of care and its relation to health system performance as well as a comprehensive framework for looking at different strategies and their potential contribution to improving health care quality;
(b) Introduce key components of international and European governance for quality of care;
(c) Highlight the effectiveness, cost-effectiveness and implementation of selected quality strategies, with a focus on the European context:
(d) Health professional regulation, including education, licensing and registration, continuous professional development and mechanisms to ensure fitness to practice;
(e) External institutional strategies for health care organizations, including accreditation, certification and supervision;
(f) ''Pay for Quality'', wherein financial incentives are paid to providers or professionals for achieving quality-related targets within a specific timeframe.
(g) Discuss and refine lessons learned through audience participation, and identify further areas for research and action.

Key messages:

- Quality of care is a political priority and an important contributor to population health. Within an overall strategic framework, understanding the potential of different quality strategies is key.
- Evidence on the (cost-)effectiveness of different quality strategies is variable but largely inconclu-sive. Maintaining an overview and identifying areas for action is paramount for policy-makers.

Understanding quality of care and analyzing different strategies to assure and improve it

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Assessing and improving quality of care presupposes an understanding of what it does and does not entail. Different definitions often specify relatively long lists of various attributes that they recognize as part of quality. Effectiveness, patient safety, and responsiveness/patient-centeredness seem to have become universally accepted as core dimensions of quality of care. The inclusion of a list of additional elements is confusing and often blurs the line between quality of care and overall health system performance. This presentation provides an in-depth look at this interplay, recognizing that the definition of quality changes depending on the level at which it is assessed. At the level of health services, there seems to be an emerging consensus that quality of care is the degree to which health services for individuals and populations are effective, safe, and people-centered. On the other hand, a health care system as a whole is of high quality when it achieves the overall goals of improved health, responsiveness, financial protection, and efficiency; here, there seems to be an international trend towards using the term health system performance.

The workshop looks at different strategies to assure or improve the quality of health care. To understand, analyze, compare and ultimately prioritize or align different quality strategies, this presentation will introduce a comprehensive framework, which includes the following lenses: i) the three core dimensions of quality: safety, effectiveness, and patient-centeredness; ii) the four functions of health care: primary prevention, acute care, chronic care, and palliative care; iii) the three main activities of quality strategies: setting standards, monitoring, and assuring improvements; iv) Donabedian's triad: structures, processes, and outcomes; v) the five main targets of quality strategies: health professionals, technologies, provider organizations, patients, and payers.

Key components of international and European governance for quality of care

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The legal status and binding nature of various international governance and guidance instruments to foster and support quality strategies in European countries differs substantially. This presentation introduces and discusses the four main elements of an integrated international governance framework for quality in health care: i) raising political awareness of the relevance of health care quality and creating a common vision on how to improve it; ii) implementing this vision into actual policy frameworks by sharing experience and practice between countries; iii) developing and providing standards and models (voluntary or mandatory) that can be transposed into national policy; iv) measuring, assessing and comparing quality by developing better information, better indicators and methodologies as well as dissemination strategies.

The presentation will also focus on how quality in health care is addressed through EU policy, first through EU provisions and policies that are meant to ensure free movement of citizens and goods and establish an internal market, and by means of more horizontal and generic EU policies on quality and safety that stem from the mandate to support, coordinate or supplement national policies. It will further highlight how EU integration and policy touch upon quality in health care and how the approach has evolved over time.

Regulation of health care professionals as a quality strategy

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Health professionals are both a health system input and an active component of the functions that the health system performs. As such, the performance of the health workforce is directly linked to the quality of health services. Regulation is essential to define a clear framework within which health professionals acquire and maintain the competence needed to provide health services that are of high quality, i.e. that are safe, effective and patient-centered. This presentation discusses the evidence on a sequence of strategies that regulate health professionals, looking at how they are currently deployed in Europe, how (cost-)effective they are, and what can be done to optimize their implementation.

Adopting a comprehensive perspective ranging from the entry into training to life-long maintenance and demonstration of competence, the presentation brings together a) strategies to develop professional competence (including training structure and contents, curriculum development and the accreditation of institutions for health education); b) strategies that regulate the entry of physicians and nurses into their professions (e.g. licensing and registration); c) mechanisms to maintain competence (e.g. continuing professional development); and d) levers to address instances when fitness to practice comes into question.

External institutional strategies for health care organizations as a quality strategy

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Accreditation, certification and supervision are quality strategies that intend to encourage the compliance of health care organizations with published standards through external assessment. The idea is that health care organizations will increase compliance with standards in advance of a planned external inspection. Despite several common characteristics of the three strategies, their origins and initial objectives differ. This presentation aims to disambiguate these concepts, inform on their utilization in European countries and discuss the evidence on their effectiveness, cost-effectiveness and implementation.

External assessment strategies have been widely implemented in Europe. Most countries make use of several strategies, including basic supervision as part of the licensing process for healthcare providers, coupled with certification or accreditation strategies to ensure and improve the quality of care. The scope of these strategies and their regulation differs substantially between countries. Despite this widespread uptake, there is little robust evidence to support their effectiveness and there is a complete absence of evidence on cost-effectiveness. Furthermore, due to the broad purpose range of external assessments and the lack of consensus in the use of terminology, implementation strategies are sparse or missing. However, this presentation highlights several facilitators and barriers that may affect the implementation of external assessment strategies in health care organizations as well as relevant insights for policy-makers.

"Pay for Quality" (P4Q) as a quality strategy

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P4Q can be implemented in various health care settings, targeting a range of health care providers or professionals. P4Q schemes can reward high quality measured in terms of structures, processes, and/or outcomes, and/or penalise low quality and are implementable in line with other quality improvement interventions. This presentation aims to clarify the concept of P4Q, highlight the use of P4Q schemes in different settings in European countries, and systematize the evidence on the effectiveness, cost-effectiveness and implementation of P4Q as a quality strategy.

We could identify fourteen primary care P4Q programmes and thirteen hospital P4Q programmes in a total of 16 European countries. P4Q schemes in primary care incentivise mostly process and structural quality with respect to prevention and chronic care. P4Q schemes in hospital care prioritize improvements in health outcomes and patient safety. Studies suggest small positive effects on process-of-care (POC) indicators in primary care but not in hospital care. Evidence on health outcomes and patient safety indicators is inconclusive. Cost-effectiveness is unlikely because of lacking effectiveness. P4Q schemes are more effective when the focus of a scheme is on areas of quality where change is needed and if the scheme embraces a more comprehensive approach, covering many different areas of care; however, such programmes are generally technically and politically difficult to implement. In this light, this presentation will conclude with a number of recommendations, both technical and policy-oriented.

6.I. Vaccination policy and infectious diseases

Increasing HPV vaccination uptake among adolescents: A Systematic Review

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Background:

Human Papillomavirus (HPV) is responsible for the development of several pathologies besides the cervical cancer and HPV vaccination is a key strategy for primary prevention. The aim of this research was to identify strategies adopted to increase HPV vaccination coverage among the adolescents.

Methods:

A systematic review was carried-out by searching electronic databases (Pubmed, Scopus, and Web of Science) using selected keywords as ‘‘papillomavirus vaccine’’, ‘‘vaccination strategy’’ and ‘‘efficacy’’. Articles conducted in high-income countries and evaluating the impact of one or more strategies on vaccination coverage (initiation e/o completion) in adolescents were included.

Results:

Out of 3571 single citations screened, 42 papers (2011-2018) were included. Study size ranged from 50 to 325229 individuals. The major part of the studies was from the United States (n = 35; 83,3%) and conducted with an experimental design (n = 17; 40,5%). The evaluated outcomes included first dose uptake, schedule completion, vaccination timeliness and the number of administered doses. Identified strategies included reminds (9), education activities (9), multicomponent strategies (22) and others (2) and were focused on adolescents/parents and/or healthcare providers. Significant positive results were reported in seven studies (77,8%) evaluating the impact of reminds, four studies (44,4%) on education strategies, and in 12 studies (54,5%) on multicomponent strategies. Offering vaccination in ‘‘bundle’’ or during any medical visit was also reported as significantly effective.

Conclusions:

Increasing the vaccination coverage is essential to achieve HPV-related diseases control. Several types of strategies are available and showed a positive impact on vaccination uptake, in particular those relied on reminds. Nonetheless, the heterogeneity of interventions suggests the importance to adapt such initiatives to the specific context in order to maximize the improvement in vaccination uptake.

Key messages:

- Several types of strategies to increase vaccination uptake are available at international level and showed a positive impact among adolescents.
- These interventions are heterogeneous suggesting the importance of their adaptation to the specific context in order to gain the maximum improvement in vaccination uptake.

Knowledge and attitudes about Human Papillomavirus and its prevention in Italian students, 2018

Federico Romanese

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Background:

Human Papillomavirus (HPV) infections show an estimated prevalence of 290 millions of cases worldwide, being the most common viral infection related to the reproductive tract and the main cause of cervical cancer. Being HPV vaccination currently recommended for both genders, we assessed knowledge and attitudes regarding HPV prevention among high school students in Udine, Northern Italy.

Methods:

Between April and May 2018, a sexual and reproductive health anonymous questionnaire was proposed to first-year students in five academic, technical and vocational upper secondary schools of Udine. In particular, students were asked about HPV related diseases, whether they were vaccinated against HPV and how that decision was taken. Data were analyzed by school type and gender using Chi Square Test with $\alpha = 0.05$.

Results:

A total of 747 questionnaires were collected from 990 students; both genders had a mean age of 14.8 ± 0.9 years, 59% of respondents were males. Technical high school students were 42% of the sample, while 30% came from vocational and 28% from academic high schools. Genital warts and cervical cancer were identified as HPV-related by 8% and 20% of students respectively, the latter more frequently in technical institutes ($p = 0.0016$) and in females (43% vs 13%, $p < 0.001$). Almost 54% of students did not know if they were immunized against HPV; academic school students and females declared more frequently to have received at least one vaccine dose compared to others ($p < 0.001$). Almost two thirds of respondents reported to have undergone vaccination due to a parental decision; parents discussed this choice more frequently with academic students ($p = 0.0016$) and females (22% vs 14%, $p < 0.001$).

Conclusions:

Girls and technical school students are more informed about HPV, while adherence to immunization schedules is higher in females and those attending academic school. Parents appear to create a supportive environment for females.

Key messages:

- The different level of knowledge by gender can be explained by past vaccination campaigns, mainly focused on girls, and by parental proactivity towards females.
- There is room for improvement in HPV-related knowledge and prevention among both adolescents in general and males in particular as they can play an important role to reduce the burden of HPV.

Awareness of HPV and drivers of HPV vaccine uptake among university students in Italy

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HPV vaccination is a milestone in primary prevention. However in Italy, vaccine coverage is still nowhere near the target of 95%. We investigated drivers of vaccine uptake among university students, as they are likely to have just assumed a central role in their healthcare decision-making and potential barriers may differ from parents.

University students aged 18-25 were asked to fill in a questionnaire. The effect of socio-demographic and behavioural characteristics on HPV awareness was assessed with a logistic regression adjusting for age, gender, nationality, degree course, relationship, age at first intercourse, number of sexual partners, smoking, sexual orientation, past diagnosis of STDs and knowledge of people who had received HPV vaccine. A second regression adjusting also for information sources, awareness and knowledge investigated drivers of vaccine uptake.

9,988 questionnaires were included; awareness of HPV and vaccine was 83.3% and 69.9%, respectively. Awareness (adjOR: 3.3 95%CI 2.3-4.6) and a good knowledge positively affected acceptability, as well as a previous diagnosis of STDs and knowledge of vaccinated people. Healthcare workers (adjOR 1.6 95%CI 1.4-1.9) and family members (adjOR 1.7 95%CI 1.4-2.1) were the most influencing information sources, even if knowledge of vaccinated people was by far more persuasive (adjOR 2.7 95%CI 2.2-3.3). Only 12% of participants were acquainted with skin to skin HPV transmission, while 75% believed in a full effectiveness of condom; less than 22% associated HPV with cancer (other than cervical cancer).

Efforts to increase awareness are likely to be worth considering that: awareness is the main determinant of vaccine uptake; only 50% of individuals not interested in receiving vaccine were aware of it; males are much less aware (adjOR 0.09 95%CI 0.07-0.11). Moreover, this study spotlights some misconceptions and may provide suitable evidence in tailoring more efficacious communication strategies.

Key messages:

- There is room for improving the awareness of HPV. Efforts are likely to be worth since it remains the main determinant of vaccine uptake. Awareness has been growing but a gender gap still persists.
- Communication should focus more on HPV involvement in neoplasia other than cervical cancer; transmission via skin to skin contact; multiple sex partnership; partial protection of condom.

Determinants of the intention to vaccinate with MMR among pregnant women from the City of Rome

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Background:

Further to the increase in measles cases reported in Italy since 2016, MMR vaccination became mandatory in 2017, leading to an increase in vaccination coverage in the Country. To guarantee sustained coverage, factors influencing the intention to vaccinate in the population should be better understood.

Methods:

We conducted a cross-sectional survey to assess knowledge and attitudes on pediatric vaccinations and intention to vaccinate among pregnant women attending Antenatal Classes in Rome, through distribution of a self-administered questionnaire, which included a specific section on MMR vaccination. Multiple logistic regression analysis was performed to analyze the determinants of the intention to vaccinate with MMR.

Results:

A total of 458 pregnant women attending CANs in 36 family health centers and two hospitals answered the survey. Intention to vaccinate with MMR was associated with having received information from a healthcare professional (OR 1.92, 95%CI 1.01-3.63), the perceived importance of vaccines to protect against measles (OR 4.68, 95%CI 2.48- 9.54) and rubella (OR 5.97, 95%CI 2.98-11.95), not believing in news about the risks of MMR vaccine (OR 2.75, 95%CI 1.38-5.50), and the sense of guilt in case the child should contract the disease (OR 2.56, 95%CI 1.16-5.62). Factors negatively associated with the intention to vaccinate were the use of alternative medicine (OR 0.34, 95%CI 0.16- 0.76), believing that MMR vaccine can have serious side effects (OR 0.37, 95%CI 0.00-0.29) and guilt in case of serious side effects (OR 0.40, 95%CI 0.21-0.76).

Conclusions:

Fear of MMR side effects is a relevant driver of the intention to vaccinate, coupled with the perceived importance to vaccinate to protect against measles and rubella. Also the source of information plays an important role in shaping ideas on vaccines. Information and communication strategies should be promoted to increase trust in vaccines, with a direct involvement of healthcare workers.

Key messages:

- Fear of MMR side effects and perceived benefits of the vaccine influence the intention to vaccinate.
- Information and communication strategies to increase vaccination appectance involving healthcare workers are needed.

Measles outbreak at the Val Thorens ski station, France, 2019

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During the 2019 winter season, a measles outbreak occurred at the Val Thorens ski station in France, in an area frequented by over 300,000 holiday-makers (70% foreigners) and 2,500 seasonal workers.

Between 24/01/2019 and 15/04/2019, 55 cases were reported (18 confirmed and 37 clinical). Apart from 5 infected children under 2 years old attending the same nursery, cases were mainly seasonal workers between 19 and 41 years old. Five cases were hospitalised, one with severe pneumonia. Of the 36 cases with known vaccination status, 25 (69%) had not completed 2-dose vaccination. Other confirmed cases in visitors to Val Thorens were reported in neighbouring valleys (n = 3), and in other French regions. One case was reported the French overseas territory Guadeloupe (WHO 'Americas' region where measles has been eradicated). British, Belgian, Danish, Dutch and Irish authorities reported 7 cases in people who had stayed in the area. The list of exported cases is non-exhaustive.

The regional health agency (ARS) provided increased information on epidemic risk and vaccination recommendations, particularly to health professionals and the town council. Identifying all contacts was difficult because many had occurred with seasonal workers. In addition to the approximately 150 vaccinations carried out by the Val Thorens medical centre from the start of the outbreak, only 41 other people were vaccinated in 5 free vaccination sessions organized in situ by the ARS, and the local medical and immunization centres.

The large attendance at the station favoured the outbreak and its extension in France and abroad. Due to low measles vaccine coverage in France (80.3% for 2-dose cover in 2 years in 2017), outbreaks in non-vaccinated and not fully vaccinated populations are increasing, as seen in Val Thorens.

Key messages:

- A major measles epidemic occurring in an undervaccinated population in frequent contact with tourists, led to the extension of cases in France and Europe.
- Despite 5 free in situ vaccination sessions, with the mobilisation of local health professionals, few seasonal workers came to be vaccinated.

Measles outbreak in a public hospital, Szczecin, Poland, January 2019

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Background:

In January 2019, a measles infection in an employee in a 168-bed hospital was reported to the local sanitary station (PSSE) in Szczecin, Poland. Further transmission occurred in the hospital and more cases were reported in the community. We investigated to identify transmission routes and implement control measures.

Methods:

An outbreak case was any hospital staff, visitor, or patient, or any person in contact with them, meeting clinical criteria, from 3rd January. Cases were interviewed by PSSE to identify contacts and verify vaccination status. Susceptible contacts were offered post exposure vaccination (PEV). Clinical specimens were sent to the National Reference Laboratory for RT-PCR and serology confirmation. We collected vaccination status, geographical location and queried hospital authorities about control measures.

Results:

The index case, the hospital employee, returned from Ukraine one day before onset of symptoms. We identified 17 (8 confirmed, 7 probable, 2 suspect) outbreak cases including 11 hospital personnel. Four of the personnel provided vaccine documentation (36%), of which three had received 2 doses. Contacts identified as susceptible (130) received PEV. Eight cases were contacts of the index case but were not promptly identified and did not receive PEV. The hospital refused new admissions for 19 days.

Another 16 cases were identified in the community, with exposure information not sufficient to establish an epidemiologic link with the outbreak.

Conclusions:

The introduction of measles into a susceptible population and missing contacts for PEV led to a hospital-associated outbreak. For the community cases, exposure may have occurred in multiple public spaces around the hospital.

Most of the hospital staff who developed measles lacked vaccination records. The PSSE has recommended MMR vaccination for all hospital personnel without such documentation.

Key messages:

- This study shows how a single imported case, in an environment poorly immunized could lead to an outbreak and potentially transmit it to the community.
- It is very important to keep a high rate of measles vaccination (95% recommended by WHO) in the community and insure of immunization status of health workers.

Screening for tuberculosis among newly arrived migrants in France. Results from a practice study

Nicolas Vignier

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Background:

Screening of active and latent tuberculosis among migrants is a public health concern but physicians' practices are poorly known. The study aimed to evaluate physicians' practices in France.

Methods:

A national survey of physicians' practices about infectious diseases prevention among migrants was conducted in 2017-2018 and broadcasted by several scientific societies.

Results:

In total, 367 physicians answered; 53.1% were primary care physicians, 34.3% "TB involved physicians", and 85.5% were involved daily with migrants. Screening by chest X ray is recommended by 84.8%, 71.9% and 38.4% of participants for migrants from high- (>100 cases/100,000 p.a.), medium- (> 50/100,000), and low-incidence countries respectively. One physician in two declares considering migration conditions in his/her decision of screening migrants from low incidence countries. Primary care physicians are less likely to offer screening (aOR = 0.21[0.09-0.48], $p < 0.001$). About screening prescription, only 55.6% consider it their responsibility. TB control centres are designated by 56.7% of respondents. Concerning screening for latent tuberculosis infection (LTBI), 61.8% and 34.0% offered screening for children under the age of 15 and for all migrants (adults and children) from high incidence countries respectively; physicians working in Paris and its region being less likely to offer it (aOR = 0.45 [0.28-0.71], $p = 0.001$ and aOR = 0.43 [0.27-0.69] $p = 0.001$ respectively). Among those screening children, 88.1% recommend treatment if facing a positive result, most often with a 3-month isoniazid rifampicin double therapy, and 11.4% offer follow up alone.

Conclusions:

Physicians' practices in France regarding screening of tuberculosis among migrants are heterogeneous. Which population should be targeted for LTBI screening remains unclear in the context of contradictory national and international recommendations. The results of our study raise the issue of knowledge, and adherence to these guidelines.

Key messages:

- Physicians' practices in France concerning active and latent tuberculosis screening among newly arrived migrants are heterogeneous.
- Many physicians involved in migrants' care ignore or do not adhere to current national guidelines, especially concerning LTBI screening among newly arrived migrants.

HCV test&treat in Milan prisons-an effective strategy for microelimination and health gaps reduction

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Background:

People in prison represent a high-risk population for HCV infection control due the overrepresentation of people with a history of intravenous drug use, psychiatric patients and other vulnerable populations who have often reduced access to healthcare. With the advent of new direct antiviral agents (DAAs) HCV micro-elimination in prison setting became a feasible strategy.

Methods:
We conducted in 2017 and 2018 a cross-sectional evaluation of HCV treatment cascade in one detention prison, Opera (OP), and one pre-trial detention center, San Vittore (SV) in Milan. A dedicated protocol for HCV eligibility and care was applied. We collected data on demographics, HCV testing and treatment on all inmates on October 31st 2017 and 2018. Data collection ended on December 31st of each year.

Results:
On October 31st 2017, 2366 inmates were living in the two facilities, 2369 in 2018, of these, 1036 (43,7%) were already present in 2017 (71,3% in OP; 28,7% in SV). In both years the majority were men (95.4%; 96,4%) with a median age of 41 years and Italians (57%; 61,9%). Prevalence of reported drug use remained high (46,5%; 44,2%). HCV screening coverage was 89% in both years, while HCV-RNA test coverage increased (90,6%; 99%). HCV Ab+ was stable (212, 10.1%; 194, 9,2%). At the end of 2017 and 2018, 106 (50%) and 117 (60,3%) started treatment eligibility process of which 90 (42,4%) and 106 (54,6%) completed DAAs in prison. Considering last available viremia, 41 inmates (19,3%) were viremic in 2017 (OP 16.1%; SV 24,4%), while only 13 inmates (6,7%) in 2018 (OP < 1%, SV 15,4%). On December 31st 2018, among HCV Ab+ detainees 122 (62,9%) were never linked to care before incarceration.

Conclusions:
Our study shows the success of the HCV testing and treatment strategy to achieve HCV micro-elimination in a prison setting with a significant drop in the pool of viremic individuals. We highlight how prison health care may represent a unique point of access for vulnerable population.

Key messages:
- HCV micro-elimination is a feasible and effective strategy in prison settings.
- High-quality healthcare in prison contributes to reduce health gaps and improve access for socially deprived population.

6.K. Workshop: Addressing the mental health needs of lesbian, gay, bisexual, and transgender populations

Organised by: EUPHA (SGMH)
Chair persons: John Pachankis - USA, Arjan Van Der Star - EUPHA (SGMH)
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Today a large number of studies from different parts of the world clearly show that compared with heterosexuals lesbian, gay, bisexual, and transgender (LGBT) individuals have an increased risk of mental health problems, especially depression, anxiety and suicidal behaviour. To meet this increased risk of mental health problems, many governmental public health agencies call for policy and intervention programs addressing specific needs of LGBT individuals. Despite the clear need for evidence-based care, prevention, and treatment specifically tailored to LGBTQ people, there are currently few such programmes due to lack of sufficient research.

This workshop will give examples of studies on mental health care needs among LGBT individuals and effect of evidence-based training for mental health providers, as well as, studies showing improvements of mental health after treatments. Dr. Corina Lelutiu-Weinberger (Rutgers University, USA) will present results from a newly conducted study of LGBT-affirmative mental health training for health care providers in Romania. Dr. John Pachankis (Yale University, USA), will present results showing improvements in mental health among transgender individuals after receiving gender-affirmative surgical treatment, using a total population dataset from Sweden. Dr. Igor Grabovac (Medical University of Vienna, Austria) will present health and well-being disparities based on sexual orientation among older LGBT individuals in England. The situation for LGBT individuals varies greatly across Europe. The level of acceptance for minority sexual orientations differs greatly by country, and in many countries, LGBT people are also subject to legal discrimination concerning basic civil rights, e.g. regarding recognition of same-sex unions. During the workshop, Dr. Richard Bränström (Karolinska Institutet, Sweden) will present data on experiences of discrimination in health care settings and openness with sexual and gender identity to mental health providers among LGBT populations across all 28 European Union Countries.

Key messages:
- Today a large number of studies from different parts of the world clearly show that compared to heterosexuals LGBT individuals have an increased risk of mental health problems.
- Access to supportive mental health care for LGBT individuals varies greatly across Europe and dissemination of targeted LGBT-affirmative evidence-based interventions needed.

Web-based training and supervision for LGBT-affirmative mental health practice: A randomized controlled trial

Corina Lelutiu-Weinberger

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Background:
Lesbian, gay, bisexual, and transgender (LGBT) individuals in most countries remain stigmatized, requiring culturally sensitive mental health care to foster coping and resilience. This trial tested the efficacy of an LGBT-affirmative mental health training for psychologists and psychiatrists in Romania, where such resources are scarce. The trial compared in-person and web-based training modalities.

Methods:
Participants were randomized to a 2-day training either in-person ($n = 56$) or via web by viewing the live-streamed training ($n = 54$), and assessed pre- and 5-, 10- and 15-months post-training, with optional monthly web-based supervision ($n = 47$) after the first follow-up. Generalized linear mixed models were conducted to assess for change across time.

Results:
The sample (M age = 34.98) was mostly female (88%) and heterosexual (84%). Trainees, regardless of in-person or web-based attendance, reported significant decreases from baseline to 15-month follow-up in explicitly ($b = 0.21$, 95% CI $0.06 - 0.37$, $p < 0.01$) and implicitly ($b = 0.26$, 95% CI $0.10 - 0.41$, $p < 0.001$) assessed homonegativity, and significant increases in LGBT-affirmative clinical skills ($b = -1.19$, 95% CI $-1.41 - -1.00$, $p < 0.001$), beliefs ($b = -0.17$, 95% CI $-0.31 - -0.03$, $p < 0.05$) and behavior ($b = -1.17$, 95% CI $-1.72 - -0.61$, $p < 0.05$).

Conclusions:

Training in LGBT-affirmative mental health can change provider attitudes and practice in high-stigma countries. The fact that web-based trainings were equally efficacious as in-person trainings suggests that such education can have widespread reach. As LGBT individuals represent one of the highest-risk global populations for mental health problems driven by stigma, findings hold strong public health potential. Future research should assess the impact of such trainings across high-need settings and include patient outcomes.

Reduction in mental health treatment utilization among transgender individuals after gender-affirming surgeries: A total population study

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Background:

Despite professional recommendations to consider gender-affirming hormonal and surgical interventions for transgender individuals with gender dysphoria, the long-term effect of such interventions on mental health is largely unknown. This study aims to ascertain the prevalence of mood and anxiety disorder healthcare visits and antidepressant and anxiolytic prescriptions in 2015 as a function of gender dysphoria diagnosis and gender-affirming medical treatment in the entire Swedish population.

Methods:

This study used the Swedish Total Population Register (n = 9,747,324), linked to the National Patient Register and Prescribed Drug Register. Among those who received a gender dysphoria diagnosis between 2005 and 2015 (n = 2,679), mental health treatment in 2015 was examined as a function of length of time since gender-affirming medical treatment. The main outcome measure was mood and anxiety disorder healthcare visits and antidepressant and anxiolytic prescriptions.

Results:

Compared to the general population, individuals diagnosed with gender dysphoria were about six times as likely to have had a mood and anxiety disorder healthcare visit and more than three times as likely to have been prescribed antidepressants and anxiolytics. Years since initiating hormones was not significantly related to likelihood of mental health treatment (AOR: 1.01; 95% CI: 0.98, 1.03). However, increased time since last gender-affirming surgery was associated with reduced mental health treatment (AOR: 0.92; 95% CI: 0.87, 0.98).

Conclusions:

In this first total population study of transgender individuals diagnosed with gender dysphoria, the longitudinal association between gender-affirming surgery and reduced likelihood of mental health treatment lends support to the decision to provide gender-affirming surgeries to transgender individuals who seek them.

Main messages: This study lends support to the decision to provide gender-affirming surgeries to transgender individuals who seek them.

Well Being of Older Gay and Bisexual Men and Women in England: Results of a Cross-Sectional Population Based Study

Igor Grabovac

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Background:

Lesbian, gay, and bisexual (LGB) older people are an under-represented population in research, with limited research noting more depression, loneliness, rejection, overall poorer health and well-being outcomes. Our study compared well-being, defined as quality of life (QOL), life satisfaction, sexual satisfaction, and depression, among LGB people with their heterosexual peers'.

Methods:

Cross-sectional data from the English Longitudinal Study of Aging, collected 2012-2013. A total of 5691 participants were included in the analysis, with 326 (5.7%) self-identifying as LGB. We used CASP-19 questionnaire for well-being; the Satisfaction with Life Scale for life satisfaction; and the Center for Epidemiologic Studies Depression Scale for depressive symptoms. The question "During the past three months, how satisfied have you been with your overall sex life?" was used for sexual satisfaction. T-test and chi-square tests were used for differences in sociodemographic characteristics between LGB and heterosexual participants. Regression models were used to test associations between sexual orientation and well-being outcomes.

Results:

LGB participants reported significantly lower mean quality of life and life satisfaction, and had significantly lower odds of reporting satisfaction with their overall sex life and higher odds of reporting depressive symptoms in unadjusted models. After adjustment for sociodemographic and health-related covariates, there remained significant differences between groups in mean QOL scores (B = -0.96, 95% [CI] -1.87 to -0.06) and odds of sexual satisfaction (OR = 0.56, 95% CI 0.38-0.82).

Conclusions:

LGB older people report lower quality of life and lower sexual satisfaction than their heterosexual counterparts, possibly associated with experiencing lifelong social discrimination.

Main message: Older lesbian, gay and bisexual people in England report significantly lower QOL and sexual satisfaction in comparison to heterosexual counterparts.

The role of country-level structural stigma on sexual orientation disclosure and discrimination in health care settings among lesbian, gay, and bisexuals across Europe

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Background:

The national climate surrounding sexual minorities (i.e., those self-identifying as lesbian, gay, or bisexual [LGB]) varies greatly worldwide. Recent Cross-European studies have shown that country-level structural stigma is a strong determinant of sexual minority individuals health risk behaviors and mental health. The consequences of the significant country-level variation in structural stigma on sexual minorities' experiences of health care discrimination and disclosure of sexual orientation to health care providers have not been previously investigated.

Methods:

In 2012, 86 000 sexual minority individuals (aged 18 years and older) from all 28 European Union countries responded to questions concerning discrimination in health care settings and sexual orientation disclosure to health care providers (EU LGBT survey). Structural stigma was assessed using a combination of national laws and policies affecting sexual minorities and a measure of sexual minority acceptance among citizens of each country.

Results:

Disclosure of sexual orientation to health care providers were much more common in low stigma coutries (e.g., the Netherlands, Sweden, UK) compared to high stigma coutries (e.g., Lithuania, Latvia, Slovakia). Experiences of discrimination in health care settings were more common among LGB indiviudals who were open about their sexual orientaiton and increased by degree of country-level structural stigma.

Conclusions:

Disclosure of sexual orientation and experiences of discrimination in health care settings varies greatly among LGB individuals in Europe largely due to structural stigma surrounding sexual minorities.

Main messages:

These findings highlight the importance of eliminating legislation, policies, and national attitudes that promote the unequal treatment of sexual minorities in currently unsupportive European countries.

6.L. Round table: Substance use disorders (SUD)

Organised by: EUPHA (PMH)
Chair persons: Jutta Lindert – EUPHA (PMH), Martin McKee - UK
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Substance use disorders are among the priority conditions identified by the World Health Organization mental health gap action program. The health community has taken a range of (non-exclusive) positions on how to respond to them. These include a spectrum from prohibition, through regulation, to harm reduction and another from individually targeted measures to collective policies. Which measures are adopted depend on many factors outside the health system, including beliefs about the relationship between the individual and the state, the power of producer interests (tobacco/ alcohol industries), and the predominant public narrative. In contrast, a public health approach would focus on the risks of harm, to the individual and society, its distribution within the population, and the potential for unintended consequences. In this workshop, we will explore policy responses to four harmful substances, in four different European countries. These are electronic cigarettes (Martin McKee), cannabis (Jean-Pierre Couteron) illegal drugs (Henrique Barros) and alcohol (Jutta Lindert).

First, the case of electronic cigarettes have divided the health community. While some groups, mainly in England, have embraced them, others have expressed concerns, with US authorities describing their increasing use by adolescents as a public health emergency. We will ask why these different views exist, exploring the use of different paradigms, the prioritization of different population groups and conditions, and the role of cognitive biases. This presentation will highlight some of the wider divisions in approaches to substance use disorders. Second, the use of cannabis in France will be presented. France ranks fourth in the European Union in terms of monthly consumption of cannabis and second only to Denmark in terms of persons who have ever used cannabis. As of November 2018 the penalty for possession of cannabis in France was reduced to a €200 fine. This presentation will discuss the rationale for and expectations of this policy. Third, we will focus on Portugal which, in 2001, became the first country to decriminalise the possession and consumption of all illicit substances. Rather than being arrested, those caught with a personal supply are given a small fine or told to appear before a local commission. Finally, the challenges for Public health of harmful alcohol use will be presented. The harmful use of alcohol creates a serious health burden in refugees. Germany has among the highest alcohol consumptions in Europe, after Luxembourg, is the European country with the lowest percentage of people who abstain from drinking. Alcohol is widely accepted. This creates challenges for refugees coming from countries with much more restrictive approaches to alcohol. This presentation will explore the challenges that arise when a population coming from a regulated environment move to one that is highly liberalised, including a discussion of the challenges in developing culturally appropriate public health responses.

Key messages:

- Substance use is a major public health challenges.
- Legal and policy responses differ widely in the European Union - evidence based policies are highly beeded.

6.M. Health behaviours

Healthy behaviours and risk of all-cause mortality

Jouni Lahti

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Introduction:

Healthy behaviours are associated with better health in general but less is known about the combined associations of multiple healthy behaviours with mortality risk. We aimed to examine the associations of combined healthy behaviours with mortality risk over a 15-year follow-up among middle-aged employees.

Methods:

Survey data, collected in 2000–2002 among 40–60-year-old employees of the City of Helsinki, Finland, was linked with complete register data on mortality from Statistics Finland (response rate 67%, written informed consent for register linkages 74%). Healthy behaviours included high leisure-time physical activity, non-smoking, no binge drinking and healthy food habits. Each healthy behaviour were dichotomized and assigned a value of one for healthy and zero for unhealthy. The number of healthy behaviours were summed together (score range 0-4). Cox regression models were fitted, and the follow-up continued until the end of 2015 (n = 6336). Confounders included age, sex, marital status, socioeconomic position and self-rated health.

Results:

Of the respondents, 7% reported four healthy behaviours, 27% three, 34% two, 22% one and 9% no healthy behaviours. A total of 281 deaths occurred during the follow-up. Each healthy behaviour was individually associated with a reduced mortality risk, non-smoking having the strongest and healthy diet the weakest association. The combined association showed that those without any of the healthy behaviours (HR 2.8, 95% CI 1.51-5.29) and those with only one healthy behaviour (HR 1.89, 95% CI 1.04-3.43) had a higher mortality risk than those with four healthy behaviours. Instead, those with at least two healthy behaviours were not at an increased risk of mortality.

Conclusions:

A low number of healthy behaviours predicted mortality among middle-aged employees. Efforts should be made to promote multiple healthy behaviours among the middle-aged to enhance health and prevent premature mortality.

Key messages:

- Almost one third of the respondents had no or only one healthy behaviour.
- A low number of healthy behaviours was associated with an increased risk of mortality.

Smoking among immigrants in Norway, results from the Living Condition Survey among immigrants 2016

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Introduction:

Smoking is one of the major risk factors for health and disease. Knowledge on smoking prevalence in groups of immigrants is needed to tailor interventions for smoking cessation.

Methods:

Statistics Norway carried out a Living Condition Survey among immigrants in 2016. Participants were immigrants from twelve countries of origin with ≥ 2 years residency in Norway. They were interviewed in the main language of their country of origin, English or Norwegian as preferred. In this report 4339 immigrants aged 15-66 years were included. Participants were asked "Does it happen that you smoke?" and all participants answering yes to this question were classified as smokers.

Results:

A smaller proportion immigrant women (14%) than other women (21%) smoked, whereas a larger proportion immigrant men (32%) smoked compared to other men (22%). Among immigrant women, the proportion of smokers varied greatly, from almost no smokers from Eritrea and Afghanistan (<1%) to a high proportion among those from Turkey (32%) and Kosovo (29%). Among men, a low proportion of Eritreans (15%) and Sri Lankans (16%) smoked, but >40% of men from Vietnam, Turkey, Poland and Kosovo smoked. Having moved to Norway in young age and long duration of residence increased the odds of smoking among women. Men without a close friend were more likely than other men to smoke.

Conclusions:

Variation in smoking by country of origin and gender should taken into account in future smoking cessation initiatives and prevention among immigrants.

Key messages:

- Smoking prevalence among immigrant vary substantially by country of origin and gender.
- Smoking is related to acculturation and social environment.

Is problematic Internet use associated with substance use among youth? A systematic review

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Background:

Problematic Internet use is an important emerging public health problem. Among youth, the link between problematic Internet use and other risky behaviors needs to be define. The National Institute on Drug Abuse was recently questioning if this new problem can explain the downward trend in substance use among young people. The objective of the systematic review is to explore the association between Internet use (with an average time measure and a problematic Internet use measure) and psychoactive substance use (alcohol, cannabis) among youth.

Methods:

Empirical studies meeting inclusion criteria were chosen from important databases and then screened. Quality assessment and narrative synthesis were executed giving the high heterogeneity. Forty-three studies were eligible.

Results:

A majority of studies found a positive association for the association between Internet problematic use and alcohol use, and between Internet problematic use and cannabis use. High heterogeneity in the assessment of alcohol and cannabis use made the synthesis a great challenge. Studies with substance use assessment that were reflecting a higher risk measure more often found a positive association.

Conclusions:

Despite the diversity of the measures used, it seems that Internet use has a potential association with alcohol and cannabis use among youth around the world. When addressing risky behavior such as substance use among youth, professionals should also address problematic Internet use. Further studies are needed to assess the longitudinal impact of Internet use on youth substance use. A golden standard on how to assess alcohol and cannabis use among youth would be welcomed and certainly help future knowledge synthesis.

Key messages:

- Internet problematic use has a potential positive association with alcohol and cannabis use among youth around the world.
- Prevention programs for youth addressing risky behavior should include problematic Internet use, an important emerging public health problem.

Whole systems approaches to obesity and other complex public health challenges: a systematic review

Anne-Marie Bagnall

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Background:

Increasing awareness of the complexity of public health problems, including obesity, has led to growing interest in whole systems approaches (WSAs). We carried out a systematic review of WSAs targeting obesity and other complex public health and societal issues.

Methods:

Seven electronic databases were searched from 1995 to 2018. Studies were included if there had been an effort to implement a WSA. Study selection was conducted by one reviewer with a random 20% double checked. Data extraction and validity assessment were undertaken by one reviewer and checked by a second reviewer. Narrative synthesis was undertaken.

Results:

65 articles were included; 33 about obesity. Most examined multicomponent community approaches, and there was substantial clinical and methodological heterogeneity. Nevertheless, a range of positive health outcomes were reported, with some evidence of whole systems thinking. Positive effects were seen on health behaviours, body mass

index (BMI), parental and community awareness, community capacity building, nutrition and physical activity environments, underage drinking behaviour and health, safety and wellbeing of community members, self-efficacy, smoking and tobacco-related disease outcomes.

Features of successful approaches reported in process evaluations included: full engagement of relevant partners and community; time to build relationships, trust and capacity; good governance; embedding within a broader policy context; local evaluation; finance.

Conclusions:

Systems approaches to tackle obesity can have some benefit, but evidence of how to operationalise a WSA to address public health problems is still in its infancy. Future research should: (a) develop an agreed definition of a WSA in relation to obesity, (b) look across multiple sectors to ensure consistency of language and definition, (c) include detailed descriptions of the approaches, and (d) include process and economic evaluations.

Key messages:

- Interventions working towards systems approaches are associated with a range of positive health outcomes.
- Evidence of systems science and systems thinking was less clear, even in the most "joined up" approaches.

Electronic cigarette use and smoking reduction – longitudinal data from CONSTANCES cohort study

Ramchandar Gomajee

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Aims:

Electronic cigarettes are often used by smokers to stop smoking and former smokers to prevent relapse. We examined whether electronic cigarette use lead to smoking reduction and cessation among smokers, and relapse among former smokers.

Design and Settings:

The CONSTANCES cohort, France (2012 - ongoing).

Measurements:

Among smokers (N = 5,400, average follow-up of 23.4 months), mixed regression models were used to examine whether electronic cigarette use was linked to a decrease in the number of cigarettes smoked per day and Poisson regression models with sandwich variance estimators were used to test smoking cessation. In parallel, Cox proportional hazards regression models were used to examine the relationship between electronic cigarettes use and smoking relapse among former smokers who stopped smoking since 2010 (N = 2,025, average follow-up of 22.1 months), year in which electronic cigarettes were introduced in France. All statistical analyses were adjusted for socio-demographic characteristics, duration of follow-up, and smoking characteristics.

Findings:

There was a significantly higher decrease in the number of cigarettes smoked/day among smokers who used electronic cigarettes (decrease of 4.4 cigarettes/day) compared to those who did not (decrease of 2.7 cigarettes/day), as well as a higher relative risk of smoking cessation (adjusted RR: 1.67 [95% CI: 1.51-1.84]). At the same time, among former smokers, EC use was associated with an increase in the rate of smoking relapse (adjusted HR = 1.70 [95% CI: 1.25-2.30]).

Conclusions:

After a follow-up of approximately 2 years, electronic cigarettes use among smokers was associated to a decrease in smoking level and an increase in smoking cessation attempts but among former smokers it was associated to a higher risk of smoking relapse.

Key messages:

- Among smokers, electronic cigarette use was associated to smoking reduction and smoking cessation.
- Among former smokers who quit smoking since 2010, electronic cigarette use was associated to a higher likelihood of relapse.

Combined healthy lifestyle factors and risk of all-cause and cardiovascular first hospitalization

Licia Iacoviello

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Background:

We aimed to explore the association of combined healthy lifestyles with risk of first hospitalization for all-cause, cardiovascular disease (CVD), ischemic heart disease (IHD) and stroke in a southern Italian population-based cohort. We also investigated several biological mechanisms possibly on the pathway between lifestyles and health outcomes.

Methods:

Longitudinal analysis on 23,161 men and women (aged$\geq$35 y) recruited in the Moli-sani Study (2005-2010). We defined 4 healthy lifestyle factors as abstention from smoking; high adherence to Mediterranean diet; physical activity; absence of abdominal obesity. First hospital admissions for any and CVD-related causes were recorded by direct linkage with hospital discharge form registry. Hazard ratios (HR) with 95% confidence interval (95%CI) were calculated by multivariable Cox-regression.

Results:

Over a median follow up of 7.2 y, we ascertained a total of 9,482 hospitalizations, 3,556 CVD, 939 IHD and 589 stroke-related hospital admissions.

Adherence to all four healthy lifestyles, compared with none or 1, was associated with lower risk of hospitalization for any cause (HR = 0.82; 0.74-0.90), CVD (HR = 0.81;0.69-0.95) and IHD (HR = 0.63; 0.44-0.90) and, to a less extent, with stroke hospitalizations. Inflammatory biomarkers (e.g. C-reactive protein) were likely to partly explain the association between lifestyles and all-cause (14%) or CVD (15%) hospitalizations, while inflammation played a leading role towards risk of IHD (30%) and stroke-related hospital admissions (21%).

Conclusions:

The impact of combined 4 healthy lifestyles on first hospitalization risk was considerable. Inflammatory biomarkers explained a large proportion of this association.

Key messages:

- Improvements to lifestyle reduce the risk of hospitalizations in a general adult population.
- Achieving a greater number of healthy behaviours has the potential to reduce the burden of hospitalizations and the associated healthcare costs.

6.N. Skills building seminar: Innovative future meal services targeting old people in Europe

Organised by: EUPHA (FN)
Chair persons: Enni Mertanen - Finland, Lise Justesen - Denmark
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Aging without appropriate nutrition and provision of food services increases risk of malnutrition, weight loss, sarcopenia and lower functional capacity, quality of life and contribute to higher health care costs. It has been found that appetite, functional capacity and quality of life are closely related. New research and recommendations have been published, projects and rehabilitation programmes have been funded and new service models have been suggested, however there is still a need for adapting and implementing further public health tools in order to prevent costly care, this include a need for developing and implementing innovative ways of providing food services in combination with rehabilitation programmes.

The aim of the workshop is collaborative learning, knowledge building and discussion on future actions that is needed in order to improve public health, quality of life among elderly and prevent rising costs of health, care by focusing on food and nutrition services. This include the opportunity to collect new ideas and experiences from audience cross-different countries. Furthermore, the aim of the workshop is to support future collaboration and project ideas as part of EUPHA Section on Food and Nutrition's work on nutrition for aging people.

The discussion will be based on an introduction of three innovative projects from Scandinavian.

representing different groups of elderly. This include; 1) The young old, retired, home living, in good condition, and active elderly. 2) Community-dwelling frail old people, who need health care and meal services and 3) Residents in nursing homes with a high degree of lost food related functionality.

The workshop is organized by the leaning café -method. This provides an opportunity for all participants to influence the outcome of the workshop. The topics will be:

Young old: How to keep food related functionality in new life situation after retirement? What new food and nutrition services are needed?

Frail old: How to improve food related functionality and prevent frailing? How to use meal services (Meals on Wheels) and nutrition services?

Residents in nursing homes: How to involve residents in meal activities in order to improve or maintain food related functionality in elderly home and quality of life. Which co-operational actions could be implemented.

Key messages:

- New innovative food and nutrition services design to address risk of malnutrition and loss of functionality among a growing aging population.
- Different age-groups of elderly need different food and nutrition services.

An innovative rehabilitating meals-on-wheels service for frail old people

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Background:

Preparing meals are part of ordinary activities of daily living. However, frail old people receiving meals-on-wheels (MOW) may lose their functional abilities in relation to such preparation. No studies have investigated, whether it is possible for frail old people, receiving MOW to learn or relearn to manage own meals. The aim of this intervention is to investigate if a rehabilitating MOW service including an innovative food basket could have a positive effect on functional abilities in relation to the preparation of meals and thereby improve health-related quality of life in frail old people.

Methods:

An 8-week randomized controlled trial. 76 old people (65+ years old) who receive MOW are randomized to either a control group receiving usual MOW service or an intervention group additionally receiving one of four different food baskets consisting of four different food ingredients and recipes with graduation in degree of complexity delivered twice a week. The recipes is chosen in accordance with level of function, assessed by means of AMPS and the old adult practice cooking skills under supervision of an experienced occupational therapist. Primary outcome is health-related quality of life measured by EuroQol-5D-5L, secondary outcomes are physical function (30 seconds chair-stand), Satisfaction with food-related quality of life questionnaire, Food related functional ability questionnaire, Meal quality questionnaire, dietary intake and body weight.

Results:

The intervention is ongoing and planned to end July 2019. Data will undergo statistical analyses and presented in November 2019.

Conclusions:

The study will contribute with new knowledge about whether a rehabilitating MOW service including an innovative food basket could have a positive effect on functional abilities in relation to the preparation of meals and thereby improve health-related quality of life in frail old people.

The Breakfast Club – co-creational meal practices as rehabilitation strategies in nursing homes

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Background:

A growing aging population demands new welfare public health activities in nursing homes. Involving residents in meal activity through a co-creational approach as part of a rehabilitation strategy has been suggested as a solution, but knowledge is limited. This project explore how co-creational meal practices in a breakfast club might improve residents' food related functionality and quality of life.

Methods:

The project is designed as a three-year complex intervention study in a Danish nursing home. A breakfast club is held with 4-5 residents (16 all together) and 2-6 staff members on a weekly basis during a period of 10 month. Residents are on shift hosting the club and all members are preparing the meal together. The degree of food related functionality is assessed after each club and is analyzed through paired t-test on mean values. Semi-structured interviews in combination with Research Driven Photo-Elicitation is conducted with 16 residents and 8-10 staff members before, during and after holding the clubs in order to evaluate quality of life and potentials for implementing meal practices to everyday practices. A hermeneutic analysis strategy is applied.

Results:

Preliminary results from 12 breakfast clubs finds an increase in residents food related functionality. Data will be presented in November 2019. All residents express impact on quality of life independent of physical or mental state. Improved functionality is not the main value for participation in the breakfast club. Staff became aware of utilizing residents food related functionality.

Conclusions:

The study will contribute with new knowledge about whether co-creational meal activities could have a positive effect on functional abilities and improve health-related quality of life in residents in nursing homes. A meal practice based on co-creation has potential to become implemented as a public health activity in nursing homes and increase residents' quality of life and food related functionality.

More variable food and nutrition services for young old

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Aging population means more costs on health services by frailty, illnesses and malnutrition. Good nutrition and suitable food services can prevent life quality loss and costly consequences. The young old, retired and home living, not receiving municipal services yet, could benefit minor nutritional support and new services helping them keep functionality. However, few services are targeting the young old. Providing new food or nutrition services for people still in good condition might prevent costly care later. The aim is to identify new service ideas and designs for the young old. The project started as part of Agefood-project (Valve et al 2018) and continued with students in 2019.

Methods:

The service ideas and designs were produced in three future workshops, in Jyväskylä (n = 38, food service professionals, service developers, nutritionists), Mikkeli (n = 15, food service and home care professionals, elderly) and Lahti (n = 11, elderly and nutritionist) in 2018. In the next phase, service designs were further developed by students. The service ideas and designs are categorized and analyzed qualitatively.

Results:

Together 443 new service ideas were produced, and 56 preliminary service designs. The student group produced 77 service designs. The categories of ideas are: choosing possibilities, developing meal quality, guiding and education, technological possibilities, eating together, support, and old services. The service designs were classified the following groups: home delivered food, service supports eating at home, technological solutions, eating together.

Discussion:

Many ideas and designs need co-operation with public health people and business. The service ideas and designs need further development, but some are very promising, like personal nutrition trainer, e-learning for elderly care personnel. Better and more variable food and nutrition services can help people live at home longer. The ideas and service designs mirror the public discussion on the time.

6.O. Workshop: Greening the European Public Health conferences, and beyond

Organised by: EUPHA, EUPHA (HIA), EUPHA (ENV)
Chair persons: Rainer Fehr - Germany, Peter Van Den Hazel - EUPHA (ENV)
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Climate change is real; and its health implications are numerous and serious. The UN Sustainable Development Goals (SDG) include responsible consumption (SDG 12) and climate action (SDG 13). Scientific conferences are significant and regularly recurring components of professional life. They represent major opportunities, e.g., of information exchange, networking and quality assurance. At the same time, they involve major amounts of traveling as well as other resource-intensive activities.

For several years now, based on a perspective of sustainability and professional credibility, EUPHA has taken steps of caring about the impact on environment and health, especially of "greening" the EPH conferences. This includes efforts to learn from other associations and institutions. Within EUPHA, a "Green Club" was formed to develop suggestions and to promote the issue.

The intention is to reduce the "ecological footprint", including less resource consumption and fewer emissions. But "greening" our conferences turns out to be no trivial task. In some respects (e.g. air travel), the environmental and health implications are obvious, but to establish benign alternatives is challenging. In other respects (e.g. catering/regional food), the implications of different alternatives can be much harder to identify.

An important element of current debate on climate protection is "climate compensation", i.e. paying for compensation measures in proportion to the approximate production of CO2, e.g. from travel activities. This is offered by various providers), and often can be included during the booking procedure. There is, however, a debate questioning the rationale, pointing at technical and/or ethical difficulties implied in this approach. Given the state of climate change, it is urgent to continue the debate and to intensify practical action.

Key issues for this workshop include the following: What has been achieved so far? What experiences were made, e.g. concerning usability of tools? Can quantification of emissions from our conferences (especially from air travel) contribute to increasing awareness and to moving towards solutions? What tasks lie ahead? What specific suggestions can be given, e.g., for the 2020 World Congress Public Health in Rome?

Clearly, in tune with the SDGs, the same "footprint" metaphor applies - beyond our conferences - to regular work (in offices, labs, fieldwork and duty travel), private travel, recreation, and daily life at large. It is an open question if it is better to integrate such issues into one "integrative" (and complex) approach, or to deal with these issues "one by one", which might take ages to achieve; or what other ways towards "greening" our lives should be taken. For such discussion, it will be useful to continue cooperation with other professional associations and/or institutions, facing similar challenges.

Key messages:

- For reasons of responsibility and credibility, professional associations need to care about their ecological footprint; EUPHA created a "Green Club" and explores practical measures for "greening".
- Both resource consumption and emissions from EPH conferences are considerable, calling for intensified action, e.g. provision of evidence, awareness-building, and promotion of eco-friendly options.

Greening the European Public Health conferences – The Green Club

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EUPHA members prepared a discussion paper on EUPHA's "health and environment awareness" in 2015, presented it to the EUPHA section council, and conducted a workshop at the European Public Health (EPH) conference in Vienna 2016. Following this initiative, the Association determined that greening the conferences is one of the objectives for the EPH Conference strategy for 2017-2020. A "Green club" was set up by the Executive director in 2017.

For reducing the environmental impact of the conference, the following were some of the early objectives and actions (2016): Catering - Coffee and tea served in recycled cups; most lunch ingredients from regional and organic origin. Reduced printing - Switching to E-Posters, digital marketing and email communication. Paperless communication - Abstract submission, registration and invoicing became fully web-based; the Conference Programme and abstracts could henceforth be accessed online. The Conference Bag was made of recycled materials.

With the EPH conferences in Stockholm 2017 and Ljubljana 2018, advised by the Green Club, the following initiatives were taken: Lunches and Conference Dinner no longer served beef; vegan and vegetarian menus were introduced. Reduced printing - By 2018, the option to have a hard copy of the list of delegates was no longer offered. The conference Foundation encouraged its suppliers to limit the environmental impact of their products and services. In Stockholm, all restaurants at the venue were licensed to use the Nordic Ecolabel. All delegates and participants were encouraged to travel CO2 neutral.

For Ljubljana in 2018, the Green club consulted the WHO Europe publication ‘‘Planning Healthy and Sustainable Meetings’’ and considered initiatives that participants could do for compensating their environmental impact. For the 2019 conference, discussions are intended to involve a wider conference participation.

Using the WHO EURO checklist for healthy and sustainable meetings

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Following the decision by the EUPHA/EPH Conference Green Club to use the WHO EURO checklist for healthy and sustainable meetings for the EPH Conferences in Ljubljana 2018, the Green Club thought it a good idea to set a baseline on the health-related and sustainability measures for conferences organised in Europe. If we could compare several European conferences on public health related topics with our own EPH Conference, we could formulate objectives for the future, to be included in the next EPH Conference strategy 2020-2025. The ambitious idea of the Green Club was that EPH Conferences should always be above the average of other conferences organised in EUPHA, whilst continuing to strive for being the best in Europe.

The executive director of EUPHA decided to use the WHO EURO checklist for all the meetings and conferences she would attend in 2019. In the planning for 2019 were 20 meetings throughout Europe. It is expected that this would provide a nice baseline.

The WHO EURO checklist includes questions on venue and transport, invitation and conference materials, food, beverages, tobacco-free, physical activity classes and breaks, waste and use of sustainable materials. Special attention was given to people with disabilities.

The interim results (until the end of April) show that a large fraction of the questions can only be answered if you are the conference organiser, not a conference participant. This was true for questions like: ‘Does the venue use energy-efficient practices?’. Some questions address more fundamental issues, e.g.: ‘Is holding a meeting in a virtual format ... an option?’. The issues of travel mode and/or emission offsetting are not included.

Overall, the checklist approach seems useful. Short of supporting benchmarking, it helps collecting qualitative information and model solutions, and may foster networking among associations towards healthy and sustainable meetings.

Towards quantifying CO2 emissions from EPH conference travel

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Background:

Aviation is accountable for significant emissions of carbon dioxide (CO2). Factors determining emissions include, e.g., trip distance, aircraft fuel efficiency, cabin class, atmospheric conditions, and stopovers. Approaches to estimate the carbon footprint are available, e.g., as carbon emissions calculators, offered by carbon offset providers.

Goal: To estimate the amount of CO2 emissions associated with EPH conference air travel, for fostering awareness among EPH conference attendees.

Methods:

Based on EPH attendees’ empirical distribution of countries of origin for the 2017 Stockholm and 2018 Ljubljana conference, rough estimates of travel distances, CO2 emissions, and potential carbon offset costs were produced. In the absence of attendees’ detailed travel information, simplifying assumptions had to be made, e.g. on air vs. ground travel, place of departure, and stopovers. In approach A, using two different offset calculators, we look at a given ‘‘sample’’ country which provided a large fraction of foreign participants in both 2017 and 2018, then try to extrapolate to participants at large. In approach B, we use a rough approximation of total distance travelled by all participants, and an average emission value per distance unit.

Results:

In approach A, expectedly, the emission estimates provided by the two different calculators and the associated price tags for offsetting were rather similar, whereas the overall approach B created lower estimates of CO2 emissions. In summary, the conference air travel was estimated to emit 650-930 tons CO2, with the cost for setoff being roughly € 20.000. In a typical case, the conference air travel CO2 emission of a person (foreign to the conference country) was estimated as being 580 kg. For comparison: to bring climate change to a halt, the total annual CO2 emission per person needs to be below 600 kg.

Discussion:

While estimates should be improved, a major task lies in promoting CO2 emission reduction and mitigation.

6.P. Workshop: The Danish MAMAACT trial as an example for discussing evaluation methods in complex interventions

Organised by: University of Copenhagen
Chair persons: Sarah Fredsted Villadsen - Denmark, Helle Johnsen - Denmark
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Over recent years, immigration to Europe has risen significantly. This development has led to increasing birth rates by non-Western immigrant women. Maternity care systems are not yet adapted to this increased diversity of women. In

Denmark, 13 % of all children are currently born by women originating from non-Western countries. Despite a publically funded antenatal care, non-Western immigrant women have lower utilization of Danish antenatal care compared to other women giving birth.

Many non-Western immigrant women have an increased prevalence of severe maternal morbidity and higher risks of maternal death, stillbirth and infant death compared to the majority populations. Poor health status at birth can impair the cognitive, sensory and motor development and lead to learning disabilities during school age, and thus reduce equality in life chances. Suboptimal care is a contributing factor to these ethnic disparities. Provision of appropriate antenatal care is pivotal to reduce these serious disparities and challenges to public health, however little is known about models of care, which can overcome these barriers.

The MAMAACT intervention was developed to increase response to symptoms of pregnancy complications among maternity care providers as well as non-Western immigrant women. The intervention consisted of postgraduate training of midwives in intercultural communication and health education materials (leaflet and an app) for non-Western immigrant women describing how to respond to warning signs during pregnancy in six different languages, The intervention was implemented at 10 out of 20 Danish maternity wards as part of a national trial from the year 2018 to 2019, potentially reaching 25.000 pregnant women, including 2500 of non-Western origin. This workshop shares insight into innovative ways of providing antenatal care for non-Western immigrant women and will focus on methodological aspects of scientific evaluation of complex interventions for vulnerable populations. The workshop includes an introduction, three presentations, and a discussion with the audience.

Using quantitative data, the first presentation will give an overview of ethnic disparities in stillbirth and infant death in Denmark. The second presentation will present qualitative data from the implementation evaluation of the MAMAACT intervention with a focus on the interventions program theory, methodological considerations and evaluation results. Finally, the third presentation will illuminate how the concepts of Health Literacy and cultural health capital contribute to an understanding of mechanisms leading to ethnic disparities and how they can be used for evaluating the impact of the MAMAACT intervention. The final discussion will stimulate knowledge sharing between the participants on how to combine quantitative and qualitative insights in trials, how to build partnerships and recruit vulnerable populations in evaluations, and how to use sociological theory in evaluations.

Key messages:

- Reducing ethnic disparity in reproductive health requires maternity care systems to rethink their antenatal care services so they are better equipped to support non-Western immigrant women's needs.
- Sharing knowledge on the use of mixed methods, recruitment of vulnerable populations, and the use of sociological theory can contribute to future approaches to evaluate complex interventions.

Differences in stillbirth and infant mortality by maternal country of birth and descent in Denmark

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International studies have reported inequalities in stillbirth and infant death among ethnic minority groups compared to the host population. The same tendencies have been reported in Denmark. We investigated differences in the risk of stillbirth and infant death among offspring of immigrants and descendants in Denmark, compared to the risk among women of Danish origin.

The population-based register study included all live births and stillbirths with gestational age $\geq$ 22 weeks delivered by women of Danish origin, immigrant women and descendants in Denmark in the period 2005-2016. The study population was restricted to deliveries by women of Danish origin and country groups of immigrants and descendants with more than 2000 deliveries during the study period (n = 792 705).

Logistic regression analysis adjusted for year of birth was used to estimate odds ratios (OR) with 95 % confidence intervals (CI) of the association between maternal country of birth and country of descent and respectively stillbirth and infant mortality.

Immigrant mothers from Turkey, Iraq, Somalia, Pakistan, Afghanistan, Syria and Iran had a statistically significant elevated OR of stillbirth compared to women of Danish origin; adjusted OR̀s ranging 1.45-2.93. Danish-born women with respectively Turkish (OR 1.44, 95 % CI 1.00-2.07) and Pakistani descent (OR 2.32, 95 % CI 1.50-3.60) had an increased risk of stillbirth similar to the one among immigrant women with the same origin. For infant death, we found increased OŔs among immigrant women from Turkey (OR 1.76, 95 % CI 1.28-2.40), Somalia (OR 1.84, 95 % CI 1.31-2.58), Lebanon (OR 1.63, 95 % CI 1.03-2.60) and Pakistan (OR 2.85, 95 % CI 2.05-3.96). Only women of Pakistani descent (2.22, 95 % CI 1.28-3.86) had a statistically significant increased risk of infant death.

These findings show substantial differences in stillbirth and infant death according to maternal country of birth and descent in Denmark during the first decades of the 21st century.

What can we learn from the national implementation of The MAMAACT intervention?

Helle Johnsen

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Initiatives to improve maternal and child health among non-Western immigrant populations in Western countries are still sparse. So far, interventions within antenatal care have primarily focused on doula support and group-based antenatal care.

A qualitative evaluation of the implementation of the intervention was undertaken to explore midwives and non-Western immigrant women's attitudes towards and experiences of using the MAMAACT intervention. The evaluation also investigated key contextual factors impacting the interventions utilization. Data consisted of focus group interviews with midwives (n = 9) and in-depth interviews with non-Western immigrant women (n = 15), as well as observations of midwifery visits (n = 42). Data were collected at five intervention sites across Denmark and it was analyzed using systematic text condensation.

Findings show that midwives found the MAMAACT intervention to be a relevant tool, which was easy to implement in antenatal care. Several organizational factors such as task load, interpreter services and lack of cooperation with general practitioners impacted the implementation of the intervention. Non-Western immigrant women found the leaflet and app to be useful tools in distinguishing between normal and abnormal pregnancy symptoms. The degree to which the intervention was used by the women varied between the participants, and women also used other sources of information during their pregnancy. Contextual factors such as lack of social network and material resources as well as language proficiency impacted how women responded to their pregnancy symptoms. Findings show that in addition to targeting the intervention to midwives and non-Western immigrant women's informational needs, structural factors such as the organization of antenatal care and women's socioeconomic conditions need to be addressed in order to reduce ethnic disparity in reproductive health.

Ethnic disparity in health literacy related to interaction with the health care provider

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With the current orientation towards patient-centered care, the health literacy level is an important predictor for the engagement in preventive health care services. Research has shown that adult immigrants have lower levels of health literacy compared to the host populations, however little is known about the health literacy of pregnant, immigrant women. The aim of this study was to analyze whether ethnic minority women found it more difficult to actively engage with their health professionals than ethnic Danish women did.

Using cross-sectional data we studied the difference in the Health Literacy Questionnaire (HLQ) domain on actively engagement with health care providers between non-Western born and ethnic Danish women (n = 406). Pregnant women were recruited in 2016 from the largest maternity ward in Denmark. The mean health literacy level of actively engagement for ethnic Danish women was 4.15 and for non-Western born women, it was 3.97. In an adjusted model the non-Western born women had 1.15 (CI:-0.30; -0.01) lower levels of actively engagement compared to ethnic Danish women.

These results indicate that this domain of the HLQ seems to be a useful link in understanding ethnic inequality in birth outcomes and thus relevant in the effect evaluation of the MAMAACT study. Currently, the health care system in Denmark has not focused on intercultural competence. The lower levels of self-reported ability to engage with health care providers and the known perspectives of lower patient safety in immigrant groups calls for more research in the interactional dynamics. A theoretical analysis using the concept of cultural health capital could be interesting for assessing how health care providers and non-Western women might value certain attitudes and behaviors exchanged during the encounter differently, which could lead to imbalance as the health care provider has more influence in this setting.

6.Q. Workshop: Health Literacy in the workplace: from health literate organizations to resilient individuals

Organised by: EUPHA (HP)
Chair persons: Luís Saboga-Nunes - EUPHA (HP), Carine Simar - France
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This workshop aim is to explore the call that is proposed by the WHO declarations of Nairobi and Shangai, that institutions should move forward to become health literate organizations. This workshop addresses qualitative and quantitative health literacy research work settings of health and non-health professionals. Health literacy has evolved into a significant public health and health promotion goal which is especially influenced by the social and cultural background, the availability of resources, and the settings in which it is practised. Basically, health literacy can be defined as the knowledge and skills to access, understand, appraise and apply health information in order to promote health and well-being. For a long period most research had focused on adult patients in clinical settings, but in the recent past there have been significant efforts from research, practice, and policy towards citizens in other organizational settings, which is due to findings stating that effective health literacy promotion begins and continues across all settings in a whole society approach since health is mostly shaped outside the health care setting. Such approaches can also be influential when addressing the reduction of health inequalities.

The main objective of this workshop is to present first time empirical findings and developments from ongoing research projects of the Health Literacy in workplace (ProLiSa). Thereby, it will shed light on the health literacy of professionals, and link the current debate with contemporary public health approaches to advance the field of health literacy. The workshop will include 5 presentations with up to 15 minutes input followed by discussions. The first presentation is a tentative to understand health literacy and ehealth tools to improve quality of life. From Brazil a second presentation will consider health care organizations (hospitals) and the perspective to move to health literate organizations. From Portugal a third presentation will consider migration and integration and the case of health literacy as a foundation to promote cultural sensitiveness in the organizational setting. A forth presentation will consider how communicating with migrants can be a challenge and how children's health literacy, digital technology can become and critical help. Finally the last presentation considers the role of health literacy and physical activity as buffers to counter act work related stress.

This workshop offers a forum for researchers, practitioners and policy-makers interested in health literacy. By dialogue and two-way communication lively interaction and vivid discussions will be facilitated. This will allow discussing results with regard to their benefit for improving health literacy research, practice, and policy-making, support further synergies, break down barriers between research infrastructures, facilitate networking and collaboration, and support international capacity building.

Key messages:

- There is need for empirical health literacy research in work settings. It will allow informing sustainable and effective interventions and the development and application of better tools.
- Addressing the social environment will have impact on public health research & practice, will facilitate the development of health literate organizations, new concepts/strategies for health promotion.

Health literacy and ehealth tools to improve quality of life

Luís Saboga-Nunes

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Introdution:

The use of smartphones and apps to achieve numerous goals, has reached a vast number of citizens today in the world. Health related apps (HAPPS) (estimated to be 318.500 in 2017) have become popular, but little is known about their real impact in public health. The goal of this research is to understand what are the most common used HAPPS, how health literacy (HL) mediates their use and to what extent do they contribute to quality of life.

Metods:

The study is observational, cross-sectional and includes both quantitative and qualitative data from an adult population working in the financial corporation. By the means of a survey (CAWI) data was collected about HL (using the European Health Literacy Survey validated to Portugal ((HLS-EU-PT), the use of apps and their influence on quality of life. The sample (n = 748) includes participants from the different offices of the company in Portugal main land and its autonomous territories.

Results:

In this study (58.7% males) 40% of the individuals have between 36 and 45 years old, and 9.2% refer the use of health promotion apps. Of the participants, 7.1% have inadequate, 39.0% problematic, 36.6% sufficient and 17.3% excellent HL (HLS-EU-PT). Content analysis showed the categories most common in this sample were apps for running 44.9% (58.1% males) and health monitoring 26.1% (with 55.6% males). Those who use apps have a slightly higher value of HL than those who don't use, but this difference is not statistically significant.

Conclusions:

In this sample not more than 10% of individuals are using apps to promote their wellbeing. Implementing research focusing HL, quality of life and the use of mhealth tools is a new field in public health and allow researchers to identify trends that may trigger strategies to implement health promoting strategies in the work setting. More research is needed to understand how mhealth shape the everyday lives of prosumers in their quest for wellbeing.

From health care hospitals to health literate organizations: the case of health literacy of health workers in Brazil

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Background:

Health literacy (HL) presents itself as a strategy to rethink lifestyles and enhance health promotion strategies (with the inclusion of social determinants of health) in the workplace. The aim of this research was to evaluate HL levels of health workers from the urgency and emergency sector of a public hospital in Brazil (Uberaba, Minas Gerais, HC/UFTM-SUS).

Methods:

An exploratory, quantitative and qualitative research based in the European Health Literacy survey (validated to Brasil HLS-EU-BR) collected data from 216 participants, by the means of a CAWI methodology.

Results:

A total of 141 participants were retained for data analysis. HL level of participants from the administrative sector reached a score of 40.0% for insufficient and problematic HL; 33.3% had sufficient HL levels and 26.7% showed excellent HL levels. For the category of Healthcare medium / technical level, 48.2% had inadequate and problematic HL; 37.5% had sufficient and 14.3% showed excellent HL levels. In the third category - Healthcare participants with higher education levels - 31.6% had problematic, 34.2% sufficient and 34.2% showed excellent HL levels.

Conclusions:

This is the first time the instrument (HLS-EU-BR) to evaluate HL is used in a health professional setting in Brazil. This research demonstrated that HL is sensitive to socioeconomic differences and highlights the need to promote HL of health workers. Targeting lower socioeconomic groups that have a routine of dealing with the general public in a public hospital to increment HL levels, seems to be an option worth investigating. Such a proposition could not only benefit the specific worker, but target a social change in quality of care, health promotion and social support that can be centered in hospitals. This would trigger the needed change proposed by WHO in Nairobi and Shangai: shifting health care organizations to health literate organizations.

Migration and integration: the case of health literacy (HLS-EU-PT) as a foundation to promote cultural sensitiveness

Alcinda Reis

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Background:

Portugal has experienced trough-out his recent history successive migration patterns. Lately, with instability in Syria and the Mediterranean routes of migration between Africa and Europe, new challenges have emerged. One of them is related to migrants' health and their navigation of health care system. In order to better understand cultural patterns of migrants, this research aims to explore their health literacy (HL) in the context of the European Health Literacy Survey framework (HLS-EU).

Methods:

A total of 748 participants from the different offices of a company in the financial sector (Portugal, main land and autonomous territories) participated in a cross sectional survey (CAWI). Age ranged from 25 to 65 years and HL was measured using the HLS-EU instrument validated to Portuguese (HLS-EU-PT). Each participant was allocated to one of the groups, either of satisfactory HL (when scores $\geq$30) or insufficient HL (when scores <30). In order to access the migrant condition, a proxy variable considered the participant's parents origin: at least one of the parents was born in a foreign country.

Results:

Out of the 748 participants, 4.1% (n = 31) were considered migrants. Of the migrant participants, 6.9% have inadequate, 51.7% problematic, 24.1% sufficient and 17.2% excellent HL (HLS-EU-PT). Migrants have lower levels of HL when compared with nationals in this sample (respectively 58.6% and 45.8% for insufficient HL) but this difference is not statistically significant.

Conclusions:

Although results didn't show an association between being migrant and lower levels of HL (when compared with nationals), it is nevertheless relevant to consider that more than 1 in every two migrants (58.6%) have insufficient HL levels. Special consideration should be given to this group to promote HL levels and further research is needed to better understand how HL and cultural sensitiveness may work for a better integration of migrants.

Communicating with migrants: children's health literacy, digital technology, health promotion tools

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Background:

Being a migrant can enact road blocks in the process of integration, if language barriers persist in the communication between health professionals and migrants. Moreover, health literacy levels (HL) can differ, based on different cultural contexts or conceptions of health and illness. This research aims at exploring migrants (digital) HL and the mediating role of migrant's children in primary health care setting. Health professionals' resort to migrants' children as interpreters and mediators has been highlighted with the younger generations' digital literacy, as critical tools to overcome such barriers. Assessing and promoting migrant's HL is a public health mandate in the promotion of individual and family health to establish a common ground base for communication.

Methods:

A qualitative and ethnographic study based on narratives, participant observation, focus group and ethno biographic interviews with nurses, migrants, medical doctors and intercultural mediators, involved 52 participants in a primary health care setting in Santarém district, Portugal. Partnership with the Observatory for Migration, the High Commission for Migration (ACM) and with migrant associations, enabled the completion by migrants of an online questionnaire focusing on digital HL.

Results:

Migrants' children were identified as facilitators in the clinical setting at three levels: the communication, HL promotion and adherence to continuity of care.

Conclusions:

Improve migrant's HL and health decisions is feasible when considering several strategies to overcome cultural barriers. Migrants' children are potential mediators in the process of communication between health professionals and adults. Awareness of their potential allows adjustments in the primary health care sector. The need to further investigate migrants' HL and digital HL (e.g. telephone translation services, Internet-based tools for scheduling health appointments) are some tasks that need further research.

Health literacy and physical activity as buffers to counter act work related stress

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Background:

Stress health problems affect 47.8% of the work force in Portugal. It is predicted that, in the next decade, these problems will overcome musculoskeletal disorders, the first cause of employee's withdrawal from work. Research indicates connections between stress and dimensions of the work place (like job satisfaction). Nevertheless the conceptual understanding of these relationships is sparse. In order to better understand these relationships, this research focus on the use of job–specific models of stress, associating them with health literacy (HL) - in the context of the European Health Literacy Survey framework (HLS-EU) - and physical exercise.

Methods:

A total of 748 participants from the different offices of a company in the financial sector (Portugal, main land and autonomous territories) participated in a cross sectional survey (CAWI). Age ranged from 25 to 65 years and HL was measured using the HLS-EU instrument validated to Portuguese (HLS-EU-PT). Each participant was allocated to one of the groups, either of satisfactory HL (when scores ≥ 30) or insufficient HL (when scores <30).

Results:

Out of the 748 participants (58.7% males, average age of 39 years), 80.4% sometimes and very often experience stress and tension in the workplace. Less than one in every two (44.4%) practice physical activity several times a week. Of the participants, 7.1% have inadequate, 39.0% problematic, 36.6% sufficient and 17.3% excellent HL (HLS-EU-PT). Employees that are more active are those who experience lower levels of stress.

Conclusions:

The research of the effects of HL combined with physical exercise, as buffer variables to problems related to the effects of work stress, is a new area of research that may help understand patterns of adherence to activities that can help workers deal with everyday working conditions. More research is needed to integrate HL strategies in the work place.

7.A. Workshop: Capacity building in public health in Northern Africa. A common effort to develop training programmes

Organised by: Babes-Bolyai University

Chair persons: Razvan M Chereches - Romania, Arja Aro - Denmark

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Background:

In the years that have followed the overthrow of the former autocratic regime and the democratization of the country, the CONFIDE partner country, Tunisia, has experienced positive political and economic changes. These changes have driven important reforms in the field of public health, yet this country is facing important challenges in building a modern health system and finding an integrate approach to the main national public health problems. In terms of health research system, in Tunisia there is little coordination between stakeholders and the institutions in charge of public health. Moreover, there is no specific mechanism for informing the Ministry of Health about the progress of research in Tunisia and overall there is no structure responsible for the dissemination of research results to the public. To this end, the European and Tunisian members of this consortium have designed together the present capacity building project which aims to inform public health policies in Tunisia based on evidence and contribute to the development of public health research. The CONFIDE project is contributing to the development of the public health field in Tunisia and provides knowhow and tools to the Tunisian public health professions to better collaborate with the local stakeholders.

Aim of the workshop:

The aim of this workshop is to share the experience of the capacity building process in the public health field in Northern Africa. The workshop will discuss and analyse the structure of opportunities for change and reform and the local needs of the public health domain in Tunisia and will identify the main challenges. We will present the processes used and challenges faced, but also the ways to overcome these challenges.

This workshop will contribute to the European Public Health field by increasing the visibility at European level of the efforts directed to capacity building interventions and at transferring knowhow outside Europe, specifically Northern Africa.

Program:

The introduction to the workshop will be made by Prof. Razvan Chereches MD, PhD, Professor of Public Health and coordinator of the CONFIDE project. He will describe the methodology used for the capacity building in public health trainings programme in Tunisia. The development of the Centre for Evidence Based Public Health in Tunisia and their impact on the Tunisian local and regional levels will be presented by Prof. Fatma Cheikhrouhou. The link between the knowledge transferred to the young professionals and the policy decision makers will be described by the Tunisian coordinator of the dissemination activities, Prof. Kalthoum Kallel. MScPH Maria Palianopoulou will follow with presenting the evaluation results of the capacity building process and lessons learnt. Last but not least, the sustainability of the trainings and the local effort to integrate the knowledge into the Medical University curricula will be presented by Assistant Prof. Mohamed ben Rejeb.

Key messages:

- Discussing lessons learnt can contribute to better tools for the development of public health.
- Partners̀ perspective and culturally adapted tools are important for high quality learning process.

Strengthening public health research capacity to inform evidence-based policies in Tunisia / CONFIDE

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Introduction:

Over the past 15 years, Tunisia has experienced considerable development in the political and economic areas. In this context, important reforms in the field of public health have been made, with the Tunisian universities (University of Sfax, University of Tunis el Manar, University of Sousse) on their way to educate the public health professionals who can contribute to the modernization of the health system. Funded by the EC through Erasmus+ programme, the CONFIDE project (coordinated by Babes-Bolyai University, having European partners the Southern Denmark University and Trnava University) has 3 major objectives: develop Centres for Evidence into Health Policy (C4EHPs) designed to ease future collaborations; strengthen institutional capacity to deliver state-of-the-art research into policy training program; consolidate national and local partnerships between the public health academic and non-academic sector.

The progress:

The partners have jointly contributed to the following activities: development of the Centre for Evidence into Public Health Policy, 3 train-the-trainer sessions, 9 train-the-trainees sessions, internships for trainees, one policy game. To this date, 18 trainers have been trained by European partner universities and they trained 29 Tunisian trainees in the field of public health research, health promotion and evidence-based public health policy. The trainees will participate in internships in local and regional health institutions, to practice what they have learned. A policy game will be organized, to simulate collaboration between researchers and policy makers, for public health policy elaboration.

Conclusions:

The Research into Policy training program has been implemented in all 3 Tunisian partner universities. The expected long-term changes are: young workforce trained into public health and evidence-based policies fields; university curricula modifications by introducing public health courses and developing of Masters of Public Health.

Centres for Evidence-base Public Health in Tunisia-development, tasks and opportunities

Cheikhrouhou Fatma

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Introduction:

As a part of the CONFIDE project, 3 Centres for Evidence into Health Policy (C4EHPs) were established in the Universities of Sfax (Head Office), of Tunis El Manar and of Sousse in Tunisia. The tasks of the C4EHPs include development of training programs, establishment of a national network of public institutions and NGOs, which will offer internship placements for the centres' trainees as well as enhance public health development in Tunisia in general.

The progress:

The 3 Centres were established, each with the necessary infrastructures of specially designated rooms equipped with computers, books, etc. A communication platform was launched and is regularly updated. Partnership agreements with NGOs and private institutions have been signed. The C4EHPs have supported three Train-the-Trainer modules for 18 Tunisian trainers ran by the 3 European CONFIDE partners, autumn 2018. The centres have each further trained 29 Trainees under the supervision of the European partners, spring 2019.

Conclusions:

The 3 C4EHPs will act as an open source for all trainees interested in enhancing their practical work experience, networking between academic and non-academic environment and facilitating the implementation of the trainee internships. They will also market the CONFIDE products in Tunisia with the aim to sustain the public health development also after CONFIDE. In addition, the centres will search for further international funding for both training and collaborative research, according to the research domain of each faculty. The C4EHP of Sfax will be specialized in the areas of addiction, obesity, emerging infectious diseases and the quality of public health management in rural areas. The challenges of this work include lack of infrastructure and economic resources in Tunisia, lack of multi-level and cross-sectorial collaboration in public health as well as lack of stakeholder collaboration with NGOs and other non-governmental actors in public health.

Dissemination of the capacity building results - tools adapted to the local context

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Introduction:

The Centres for Evidence into Health Policy created by the CONFIDE project are multidisciplinary; they are dedicated not only to health professionals but also to researchers, policy makers as well as other social, environmental and economic stakeholders. Good dissemination and awareness among all stakeholders are the basis of the success and sustainability of the project results.

The progress:

Since the start of the project in October 2017 and after developing a dissemination plan, the first and large-scale dissemination action was the creation of a communication platform and a website. Subsequently, we have setup Facebook, Twitter and LinkedIn pages targeting people more involved in the project. These pages are regularly updated (progress of the project, actions carried out). Two press conferences have taken place in order to reach all targeted audiences in Tunisia. Indeed, our press conferences attracted journalists as well as representatives of NGOs, and health decision-makers in the ministry. A poster and a portfolio were designed in order to introduce the project to partner organizations that provide the students̀ internships and field trainings. The project also includes a policy game as a tool to bring to the same table the policymakers, researchers and other stakeholders in the community that will further contribute to the dissemination of the CONFIDE project results. Due to the dissemination activities of the Tunisian partners, the academic community in Tunisia has been exposed to a different approach and understanding of public health. The dissemination activities of the CONFIDE results have shed a new light on public health in Tunisia.

Conclusions:

A good diffusion of the project, using tools adapted to the various audiences, will make it possible to reach a large and multidisciplinary target public and to associate them with the project. This is a key success factor for the sustainability of the Centres for Evidence into Health Policy.

How does capacity building in public health work? Insights from the midterm evaluation of the CONFIDE project

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Introduction:

In an increasingly complex, rapidly changing world with a growing inequality gap, capacity building (CB) could function as an essential instrument for improving population health in a resilient and sustainable way. The PH community has been engaged in CB for decades, but there is little empirical evidence about the effectiveness of the efforts. Most evaluations focus on the individual level disregarding the complex, dynamic and multidimensional nature of CB. The aim is to provide an overview of CONFIDE's 4-level evaluation framework - individual, organizational, network and system - and to share the findings and learning from the first 18 project months.

The progress:

A participatory, multilevel evaluation approach is used in CONFIDE. Existing evaluation models/tools, adapted to the project needs, are used to evaluate the interventions; Kirkpatrick's 4-level model guides the assessment of the training program's effectiveness and impact, social network analysis for the networking interventions and organizational capacity and sustainability tools to evaluate the performance of the C4EHPs. Data collection has been conducted via surveys and document reviews at multiple time points.

The preliminary findings show that, on the individual level, the trainees perceived increased knowledge and skills in the three PH fields. On the organizational level, human resources to deliver PH-related training in the participating Tunisian universities have been developed. On the network level, challenges have been encountered in building partnerships beyond the medical field. On the system level, significant delays have occurred in the establishment of the C4EHPs mainly due to the centralized administrative processes in Tunisia.

Conclusions:

While the project's CB process is still at an early phase, the current findings indicate that the diversity of the activities used has contributed positively to the enhancement of the beneficiaries' existing capacities in PH.

Capacity building process – medical curricula implications on the long term

Mohamed Ben Rejeb

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Introduction:

Currently, the Tunisian medical schools are going through a transition period marked by the reform of medical studies. Their curricula must be adapted to globally recognized medical education guidelines. Aware of the importance of teaching scientific research and public health, they are making efforts to integrate this new approach of education within several levels (undergraduate, postgraduate and continuous professional development). In this perspective, the public health research centres (C4EHPs) created under the CONFIDE project provide an opportunity to support such integration.

The progress:

The Faculty of Medicine of Sousse was founded in the 70s to open up to its local and regional community. So, the public health topic was one of the top priorities. With the reform started in 2011, the importance of this topic has been further developed by integrating many modules that cover different aspects of public health throughout the curriculum. In this context, the materials, modules and information developed within the CONFIDE project complement the existing modules and bring a fresh perspective on the teaching methods. The faculty of Medicine of Sousse will integrate this information in the curricula to promote scientific production by allowing students to build up their scientific research knowledge, develop higher research competencies such as critical-thinking, problem-solving and data interpretation and analysis and train public health specialists to be health policy makers in the future.

Conclusions:

Integrating the new approach based on the achievements of the C4EHP is an essential step for our faculty to develop more training in public health, ensure good quality of its teaching process and participate in the development of health policies that will improve the health of the Tunisian population.

7.B. Workshop: Screening infectious diseases amongst migrants in Europe: The diversity of policies

Organised by: French National Institute of Health and Medical Research
Chair persons: Martin Duracinsky - France, Manish Pareek - UK
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In Europe, the prevalence of several infectious diseases such as HIV, hepatitis B, hepatitis C and tuberculosis is higher amongst migrants. Late diagnosis of HIV, hepatitis B and C is a health issue that thwarts prevention efforts. Early diagnosis has obvious benefits, both for the individuals (i.e. earlier access to care with a better life expectancy) and for the community. As regard for HIV, treated patients with an undetectable viral load do not transmit the virus. This is in line with the UNAIDS 90-90-90 target that in every country 90% of people living with HIV should be aware of their positive status, 90% of them should be treated with antiretroviral and within 90% should have an undetectable viral load.

Widespread testing of HIV, HBV and HCV is recommended by European guidelines, such those from European Centre for disease Prevention and Control (ECDC). The ECDC recommends that screening for HIV, hepatitis B, hepatitis C and tuberculosis should be offered to every migrant from countries with a high prevalence ($\geq$1% for HIV and $\geq$2% for hepatitis B and C). Other recommendations include ensuring that screening and vaccination is voluntary and confidential, that migrants have a quick access to care, addressing barriers to screening, and taking into account the particular issues and needs of migrants. However, European countries have developed diverse guidelines and initiatives to address the issue of screening infectious diseases amongst migrants.

The objective of this workshop is to present several European initiatives to improve the screening of infectious diseases amongst migrants. Four initiatives will be presented and discussed: screening of active tuberculosis amongst asylum seekers with the use of a questionnaire in Switzerland; replacing the systematic chest X-ray with a screening questionnaire for active tuberculosis and introducing rapid tests for HIV, HBV and HCV for all legal migrants at entry point in France, adding HIV, HBV and HCV testing to the compulsory targeted tuberculosis test in the Netherlands and offering targeted tests for latent tuberculosis, HBV and HCV to migrants registering for primary care in the UK.

Key messages:

- Screening of infectious diseases should be targeted to migrants from high-incidence countries.
- European practices should be harmonized.

Community-based testing of migrants for infectious diseases in the UK (COMBAT-ID)

Manish Pareek

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Background:

Migration is a major global driver of population change. Certain migrants may be at increased risk of infectious diseases, including tuberculosis (TB), HIV, hepatitis B and hepatitis C, and have poorer outcomes. Early diagnosis and management of these infections can reduce morbidity, mortality and onward transmission and is supported by national guidelines. To date, screening initiatives have been sporadic and focused on individual diseases; systematic routine testing of migrant groups for multiple infections is rarely undertaken and its impact is unknown. We describe the protocol for the evaluation of acceptability, effectiveness and cost-effectiveness of an integrated approach to screening migrants for a range of infectious diseases in primary care.

Methods and analysis:

We will conduct a mixed methods study which includes an observational cohort with interrupted time-series analysis before and after the introduction of routine screening of migrants for infectious diseases (latent TB, HIV, hepatitis B and hepatitis C) when first registering with primary care within Leicester, UK. We will assess trends in the monthly number and rate of testing and diagnosis for latent TB, HIV, hepatitis B and hepatitis C to determine the effect of the policy change using segmented regression analyses at monthly time points.

Concurrently, we will undertake an integrated qualitative sub-study to understand the views of migrants and healthcare professionals to the new testing policy in primary care. Finally, we will evaluate the cost effectiveness of combined infection testing for migrants in primary care.

Ethics and dissemination:

The study has received HRA and NHS approvals for both the interrupted time-series analysis (16/SC/0127) and the qualitative sub-study (16/ EM/0159). For the interrupted time-series analysis we will only use fully anonymised data. For the qualitative sub-study, we will gain written, informed, consent.

A new strategy for screening infectious diseases amongst migrants: the STRADA study

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Background:

In France, the prevalence of HIV, HBV and HCV is high amongst migrants and widespread testing is recommended. All legal migrants in France undergo a mandatory medical check-up at the immigration center (OFII). This check-up is an opportunity to offer rapid HIV and hepatitis testing. A screening questionnaire for risk factors (TROD screen) has been developed and could help target the screening offer. The objective of the STRADA study is to evaluate the efficacy of a screening strategy for infectious diseases (Tuberculosis, HIV, HBV and HCV) based on risk-factor questionnaires amongst migrants during the medical check-up.

Methods:

STRADA is a prospective, multicenter, observational study with two parts: tuberculosis screening (evaluation of a screening questionnaire) and HIV, HBV and HCV screening. For that part we have created a risk-based questionnaire for those three infections. In the first phase of the study, all migrants eligible are offered a screening, the TROD screen questionnaire. In the second phase, the screening offered on the basis of country of origin will be compared to the screening offered on the basis of the risk factor questionnaire. Finally, a cost-effectiveness study will be performed. During the informed consent process, participants are informed that the study is voluntary and independent from the residence permit.

Preliminary results:

A risk-based questionnaire has been created and translated in 10 languages. The screening has been implemented in 20 immigration centers in France. In April 2019, 35,000 participants have answered the TB screen and 8,250 have been screened for at least one of the three virus.

Discussion:

This study will determine the acceptability, performance, utility, costs and impact of a targeted optimized screening strategy for migrants in France. The presence of infectious diseases amongst migrants is a major public health issue. STRADA is an innovative initiative that has the potential to improve screening.

Screening TB in asylum seekers in Switzerland: comparing chest X-ray and interview-based system

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Setting:

Mandatory initial screening of asylum seekers for tuberculosis (TB) in Switzerland, 2004-2005 and 2007-2008.

Objective:

To compare the yield of screening by chest radiography with an individual assessment based on geographic origin, personal history and symptoms.

Design:

Cross-sectional retrospective comparison of two 2-year periods.

Results:

The prevalence of detected TB cases was defined as the proportion of screenees starting antit tuberculosis treatment for culture-confirmed pulmonary TB within 90 days. TB prevalence was 14.3 per 10 000 asylum seekers screened (31/21 727) using chest radiography and 12.4 (29/23 402) using individual assessment. The sensitivity of radiography was 100% vs. 55% for individual assessment, but its specificity was lower (89.9% vs. 96.0%, respectively). The higher sensitivity of radiography meant shorter delays between screening and start of treatment (median 6 vs. 25 days). Its lower specificity led to a larger proportion of screenees needing further investigations for suspicion of TB (12% vs. 4%).

Conclusions:

The interview-based system initially missed more cases, but the ultimate 90-day yield was comparable for the two periods. The main difference is the delay until start of treatment, which potentially increases transmission and secondary cases. The radiograph system was more burdensome to both the health care system and the screenees, as more suspects required further investigations.

Integrating HBV, HCV and HIV screening in tuberculosis entry screening for migrants in the Netherlands

Janneke Bil

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We evaluated uptake and diagnostic outcomes of voluntary hepatitis B (HBV) and C virus (HCV) screening offered during routine tuberculosis entry screening to migrants in Gelderland and Amsterdam, the Netherlands, between 2013 and 2015. In Amsterdam, HIV screening was also offered. Overall, 54% (461/859) accepted screening. Prevalence of chronic HBV infection (HBsAg-positive) and HCV exposure (anti-HCVpositive) in Gelderland was 4.48% (9/201; 95% confidence interval (CI): 2.37-8.29) and 0.99% (2/203; 95% CI: 0.27-3.52), respectively, all infections were newly diagnosed. Prevalence of chronic HBV infection, HCV exposure and chronic HCV infection (HCV RNA-positive) in Amsterdam was 0.39% (1/256; 95% CI: 0.07-2.18), 1.17% (3/256; 95% CI: 0.40-3.39) and 0.39% (1/256; 95% CI: 0.07-2.18), respectively, with all chronic HBV/HCV infections previously diagnosed. No HIV infections were found. In univariate analyses, newly diagnosed chronic HBV infection was more likely in participants migrating for reasons other than work or study (4.35% vs 0.83%; odds ratio (OR) = 5.45; 95% CI: 1.12-26.60) and was less likely in participants in Amsterdam than Gelderland (0.00% vs 4.48%; OR = 0.04; 95% CI: 0.00-0.69). Regional differences in HBV prevalence might be explained by differences in the populations entering compulsory tuberculosis screening. Prescreening selection of migrants based on risk factors merits further exploration.

7.C. Workshop: Best practice portals for public health policies and interventions

Organised by: Federal Centre for Health Education, Germany, National Institute of Public Health, Netherlands, EuroHealthNet

Contact: yvette.shajanian-zarneh@bzga.de

Background:

To support policy and practice with evidence-based information, several countries have best practice portals for public health interventions. Some of the portals were started recently (France) and other portals exist already for several years now (Netherlands). All the countries face the same challenges, which relate to how to identify the relevant practices, the assessment of the practices (how to achieve an inclusive portal while maintaining high quality), and the implementation and the use of the practices by professionals and policymakers (integrity vs. adaptation of the best practices). In addition to best practice portals the organisations are also working on the development of What works approaches.

Objective:

The organisers will share their experiences with the development and implementation of best practice portals, and discuss the successes and challenges with the workshop participants.

Three countries (the Netherlands, France and Germany) will present the successes and challenges of their best practice portal, and, as an example of a joint European approach, EuroHealthNet will discuss both joint and independent approaches from a European perspective. At the end of the workshop we will discuss the challenges and invite other countries to share their experiences and successes with best practice portals and providing evidence for policy and practice.

With the objective to:

- Present the procedure and the assessment criteria of evaluating practices for inclusion in the portals
- Present the implementation and the use of best practices as well as the acceptance of the portals
- Discuss the issues of integrity and adaptation and how to assess the core elements of effective interventions
- Discuss the development of what works approaches (description of evidence in a short and accessible way) and their added value to best practice portals
- Discuss the value added of best practice portals, including promotion of their use by professionals and policymakers

Key messages:

- This workshop will give participants insight into best practice portals developed across Europe.
- It will discuss how countries identify and select good practice and evidence-based preventive interventions as well as the successes and challenges of such portals.

The good practice portal in Germany and considerations towards integrating best evidence

Yvette Shajanian Zarneh

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The good practice portal of the Federal Centre for Health Education / BZgA consists of a nationwide collection of projects and interventions to promote the health of socially disadvantaged groups at the community/setting level. Currently the portal includes 3067 practices, out of them 124 fulfil the good practice criteria and have been identified as such.

The portal aims to disseminate (good) practice in Germany, promote its translation into action, create transparency in terms of quality criteria and make the diversity of practice more visible. A secondary aim is to promote regional networking and the exchange of experience. To this end, an exchange platform (inforo) is also offered via the operating agency, which however is still limited in use.

The portal does not intend to identify the most effective practices, but to be a database of well-described interventions that were feasible to implement in Germany. Therefore, the evaluation process was designed as a mutual advisory process: Standardized description of project owners according to 12 good practice criteria- review by experts from the responsible coordinating offices of Equity in Health - peer evaluation by another coordinating body in another federal state - and finally evaluation by an expert from the nationwide working group at the BZgA. Thus, the evaluation process is also set up to promote mutual learning with the goal of in turn increasing quality of the practice nationwide, with the advantage of being close to the implementation needs and the potential disadvantage of lacking objectivity.

At the moment, BZgA is assessing different possibilities to integrate evidence as criteria into its good practice portal. Therefore, this presentation will end with a discussion on possibilities to integrate the identification and selection of evidence-based/evidence-informed preventive interventions, including the use of evidence criteria and quality of evidence.

Innovative strategies for the implementation of best practices

Djoeke Van Dale

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The Netherlands' best practice portal for health promotion interventions includes approximately 350 interventions. The aim of the portal is to support policy and practice with evidence based information. There are five different levels to indicate the strength of their evidence base. In 2014, a study on the implementation of the best practices included in the portal showed that health promotion practitioners often do not implement them. One of the arguments given to opt for other interventions than those listed in the portal was the assumption that the 'standard interventions' will not fit their particular local context, and that adjusting a best practice is not possible.

We will present the criteria and procedure of the assessment of the quality, effectiveness and the feasibility of health promotion interventions. There after we present two strategies to increase and improve the take up of best practice implementation. The first strategy is to describe and present the core elements of the interventions. This strategy facilitates the possibility for the sound adjustments of a best practice. The second strategy is to identify the common effective elements of a group of interventions, and present that information in an accessible way to policy-makers and practitioners. Effective elements were identified through systematic reviews in combination with focus group interviews with health promotion practitioners. The result is a What works document (What works, What probably works, What doesn't work and What's unclear).

An example of the second strategy is a synthesis of the effective elements of fall prevention interventions. These elements were translated into a practical user's guide, and illustrated with best practice interventions from the portal. Policy-makers and health promotion practitioners appreciated the new way of presenting the best practices.

Challenges to create an evidence-based programme register in France

Pierre Arwidson

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The majority of health promotion and disease prevention interventions implemented in both targeted and general populations have unknown effectiveness. This contrasts with drug treatments which must be proven effective before they can be prescribed. The recent evaluation of four addiction prevention interventions chosen by public health implementers showed that two had positive impacts on addiction prevention and two had deleterious effects.

Despite over 50 years' worth of scientific literature on the evaluation of health promotion and disease prevention programmes, it is little known and little used by project promoters. These promoters cannot be blamed for not using this literature as it is often difficult to access, to read and to understand. Even if they successfully access and read the articles, interventions are often not described properly, rendering the text useless for implementers. It is therefore necessary to create interfaces that translate this literature into a form useful for funders and project promoters.

As a result, Public Health France has studied existing portals in both the United States and in Europe. An independent double-reviewing process comparable to the review process used by scientific journals for manuscripts as in the Norwegian portal was chosen for this reason.An expert committee has worked during more than one year to design and test a scoring grid that will be published soon.

The 80+ programme evaluations found in the scientific literature will now be reviewed with the approved grid.

Public Health France has also begun visiting each region in France to present the portal to local health authorities and NGOs to enable project promoters to submit their programmes soon and to promote the use of evidence-based or research-based programmes when possible.

Development and use of best practice portals: a European perspective

Alison Maassen

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Across Europe, a number of best practice portals are in different stages of planning, implementation, and evaluation. At the European level, joint best practice initiatives are also underway, notably the Best Practice Portal of the Steering Group on Health Promotion and Disease Prevention managed by the European Commission's Directorate General of Health and Food Safety (DG SANTE), as well as topic-specific portals such as the Xchange portal managed by the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) and best practice databases from European projects (such as INHERIT on health and sustainability) or Joint Actions (CHRODIS). This presentation will look at how joint European initiatives such as these can successfully link with initiatives at the national level, as well as how they can support the achievement of international objectives such as the United Nations' Sustainable Development Goals (SDGs).

This presentation will also provide an overview of learnings and key takeaways from the Developing Health Promotion and Disease Prevention Best Practice Portals workshop, hosted by BZgA and EuroHealthNet in Cologne, Germany in June 2019. We will present further collaboration and learning conducted by participants subsequent to the June workshop.

Finally, the presentation will kick off the debate following the presentations on the value added of best practice portals and how to promote awareness, engagement, and uptake by professionals and policymakers - both of specific best practices and the portals themselves. This exercise will draw on examples from countries across Europe, as well as from European projects such as CHRODIS+, and look at ways to evaluate the success of portals, as well as practical concerns such as transferability, ownership and scalability.

7.D. Round table: The new EUPHA strategy 2020-2025: what are the new skills public health professionals need

Organised by: EUPHA
Chair persons: Dineke Zeegers Paget - EUPHA, Marieke Verschuuren - Netherlands
Contact: d.zeegers@euphaoffice.org

2019 is the last full year of the EUPHA strategy 2014-2020: Voicing knowledge. Enhancing capacity. The 2014-2020 strategy has allowed EUPHA to strengthen capacity building throughout Europe and has given our EUPHA sections and EUPHAnxt the visibility they deserve. Voicing knowledge has made big steps forwards with the help of our two presidents: Martin McKee and Natasha Azzopardi Muscat. But society has changed, new threats (fake news) are surfacing, old threats (measles) are coming back and EUPHA and its members need to adapt. In 2018, a working group was installed with representatives from our members, our sections, our Executives and EUPHAnxt to discuss what EUPHA should focus on in the next 5 years. The new strategy has (hopefully) been adopted by all our members in November 2019 (the day before the conference) and is presented here.

Next to the new strategy, EUPHA will have to develop a 5-year work plan to describe what needs to be done to achieve this strategy. More importantly, what is expected of the public health network. What skills do they need? How should the training, life-long education be shaped?

In this workshop, we will first present the changing environment (McKee), followed by a presentation on our new strategy (Azzopardi Muscat and Nagyova). We will than have a Round Table with representatives of our members and of our partners. Questions to be discussed/answered are: do they have these skills already, how can we move forward, what is missing.

Round Table members:

- Danijela Stimac, Croatian Public Health Association
- Yves Charpak, French Society of Public Health
- Jorid Grimeland, Norwegian Public Health Association
- Pasquale Cacciatore, EUPHAnxt
- Walter Ricciardi, Italian Society of Hygiene, Preventive Medicine and Public Health, president-elect of the World Federation of Public Health Associations
- Kasia Czabanowska, ASPHER immediate past president

Key messages:

- Public health will be stronger when we plan collaborative actions.
- Evidence to policy should focus on actionable recommendations.

The changing context of public health in Europe

Martin McKee

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From a public health perspective there is much to celebrate. Europe enters the third decade of the 21st century with a population that has never been healthier. Advances in knowledge, from basic sciences to public health, have transformed our ability to tackle the diseases that afflict our populations. It would be easy to become complacent. Yet, at the same time, our world is transforming rapidly and profoundly. Changing demographics, globalization, technological developments, climate change, shifting public opinions on the value of scientific evidence, a political arena that increasingly seems to focus on highlighting differences rather than looking for common ground: all these trends result in massive and complex societal challenges, which will place great strain on our public health and health care services. In addition, deep and persistent health inequalities within and between countries continue to demand action. New threats (e.g. fake news) are surfacing, old threats (e.g. measles and TB) are coming back and EUPHA and its members need to adapt. This presentation will survey the changing public health landscape in Europe and globally, highlighting key issues for EUPHA to address.

EUPHA strategy 2020-2025: Achieving a triple A rating for health in Europe

Natasha Azzopardi Muscat

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The challenges we face are complex in nature, and require multidisciplinary and intersectoral action at different governance levels. Therefore, EUPHA will reinforce its two-tier approach. On the one hand, we will support our members in providing high quality and efficient public health and health care services in European countries, regions and local communities. On the other hand, we will advocate for health and support evidence-informed health policy-making at the international level. Stimulating and facilitating mutual learning and the exchange of knowledge and experiences across experts, members and countries will be an essential element of EUPHA's approach. Not only with a focus on optimal support for our members, but also with an explicit focus on overcoming health inequalities within and between European countries.

Our new vision is to enable everyone in Europe to achieve the highest possible level of health by providing independent and authoritative analysis of the evidence, combined with targeted advocacy to achieve co-ordinated action by all key stakeholders. Our vision:

- builds on the commitments of our governments and international agencies to achieve the health-related Sustainable Development Goals;
- recognises the importance of placing Health in All Policies;
- draws on the Vienna Declaration to embrace the entire range of health determinants, including the biological, social, environmental, occupational, political, and commercial, the health care system, and everything that influences the health of our planet.

Our mission will be:

1. To ensure that there is a strong evidence base, built on sustained investments in data, research capacity, and knowledge translation in all parts of Europe that can inform policies that impact on health;
2. To identify, develop, and advocate for actionable policy recommendations to improve health;
3. and
4. To support capacity-building and collaborations that can achieve public health action.

7.E. Workshop: Everything you always wanted to know about EU health policy but were afraid to ask

Organised by: Observatory
Chair persons: Matthias Wismar - European Observatory
Contact: slgreer@umich.edu

Objective:

The EU is often criticized for being 'market-driven' and practicing a form of 'cold integration'. Any attempt, however, to strengthen solidarity and social integration in the EU is met by stakeholders in the member states with reservation and often outright refusal, arguing that health systems are national competence subject to the subsidiary principle.

This conundrum of asking for more but allowing for less has blocked a scientifically informed public debate about the EU and health policy.

The overall objective of this workshop is to discuss how health research can contribute to resolve this conundrum making the EU more conducive to the needs of health systems, public health (PH) and Health in All Policies (HiAP).

To this end we will review the following 4 specific topics

- What are is EU-health policy and what other policies are affecting health and health systems?
- What tells us the projected Brexit-impact on the UK health system and PH about the value of EU health policy?
- Are EU-trade policies shaping healthier commercial determinants of health?
- What is the added value of cross-border care at and beyond border regions?

This workshop is based on the update of the seminal volume "Everything you always wanted to know about European Union health policies but were afraid to ask" (2019, 2nd edition).

Key note Scott Greer:

In health and health systems the European Union is ubiquitous. Health systems in Europe are hard to figure without the cross border mobility of health professions. Patients going cross-borders. We have a European Medicines Agency that is regulating key aspects of the pharmaceutical market. Health systems have become part of the economic governance of the EU.

In PH we have the ECDC, a PH programme and policies on health related consumer protection and may mechanism that should protect European citizens from scourges that know no borders.

With health in all policies, the EU legislates literally on all known agents and, when in doubt, is using the pre-cautionary principle to protect citizens from health hazards.

All this is supported by a large EU research programme.

Panellist 1 N Fahy, the projected impact of Brexit on health system functions of the United Kingdom demonstrates how deep the integration goes and how beneficial it is for both health systems and public health.

Panellist 2 H Jarman: The discussion around the Transatlantic Trade an Investment Partnership (TTIP) have risen worries about privatization of health services and lowering of food standards. But TTIP is only the tip of the Iceberg given that the EU has several types of trade agreements with many countries and groups of countries, shaping the commercial determinants of health.

Panellist 3 W Palm: Cross-border collaboration is already taking place in many border regions. The European reference networks demonstrate the value of the cross-border collaboration beyond border regions, as does collaboration for joint purchasing and health workforce development.

Key messages:

- Health is important at the EU level and the EU level is important for health.
- Not shaping health and health systems at EU level will limit the perspectives of EU integration, health system development public health and HiAP.

Panelists:

Scott Greer

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Nick Fahy

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Willy Palm

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7.F. Skills building seminar: How can data on adolescents' health behavior contribute to public health policies? Lessons from HBSC

Organised by: EHESP French School of Public Health
Chair persons: Emmanuelle Godeau - France
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Adolescents (10-19) are usually thought of as rather healthy and as low users of health care compared with other age groups. Nevertheless, adolescence is a crucial and challenging transitional journey towards adult life, a time when protective health behaviours and the value of a healthy lifestyle can be adopted, or not, depending on complex interactions between determinants and individual factors. Integration of young people's health in all policies and research agendas is crucial, beyond the health sector, and keeping in mind the needs to reduce health inequalities and to ensure equitable access to services, in a broad Public health perspective.

However, Public health policies targeting young people cannot be fully relevant and efficient if they do not rely on quality data collected among young people, on their health and their health behaviours.

Under the auspices of WHO, the Health behaviour in School-aged children (HBSC) survey collects data among 11-13 and 15 years-old students since 1982, in a growing number of mostly European countries, every 4 years, through anonymous self-completed questionnaires filled in in class, using shared validated instruments and methods.

Our workshop aims at showing how data collected among adolescents, by improving our understanding of their health and health behaviours as well as their determinants and settings, can be used to inform and improve policies at national level. HBSC will be used as an exemple, because of its longevity, breadth, expertise, reputation and uniqueness in the field of adolescent health.

Five contrasted experiences will be presented, illustrating the relevance of linking scientific evidence and policy relevance in a Public health perspective. They have been chosen to offer various perspectives in terms of countries (Ireland, Luxembourg, Israel, UK), topics (well-being, suicide, substance-use, school-health), and levels of links between research and policy.

All presenters are skilled researchers, have a longstanding experience of conducting the HBSC survey and they share a strong interest in linking with policy makers in advocating the improvement of the health and well-being of the adolescents in their country.

Because they all work on the same population (adolescents), and mainly work on the same survey (HBSC), the presentations and debates will start from a common ground, saving space and time to really illustrate how health behaviour data can inform Public health policies. The presenters should give contrasted perspectives, without denying their failures and difficulties, to engage with the audience for a wider discussion, towards a better partnership between research and policy.

Key messages:

- There are national examples that illustrate that research on adolescents' health behaviour can inform Public health policy targeted at this specific population and improve its health and well-being.
- Networking and exchanging on failures and success through case studies can provide perspectives to other teams and countries on how to better build the link between researchers and policy makers.

Using HBSC data as part of Ireland's key policy documents: the example of wellbeing

Michal Molcho

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This paper examines the importance of understanding well-being in childhood and adolescence, and will present Ireland's efforts to develop a set of national indicators of wellbeing that are published every two year in the State of the Nation's Children Report. One of the main source of population based indicators of wellbeing in Ireland is the Irish Health Behaviour in School-Aged Children (HBSC). The HBSC Study in Ireland collects data from 10-18 year olds children since 1998, using a self-completion questionnaire. Data are collected every four years using standardised procedures for sampling and data collection. The same procedures are used since the initiation of the study in Ireland allowing for both cross-country comparison and time trend analysis. As part of the efforts to develop the Irish set of indicators of wellbeing, the HBSC group used a participatory research with children to identify what makes children happy, and the indicators identified by children are now routinely collected. The paper will present these indicators and how they were developed. Most recently, the HBSC study group was asked to develop indicators to the new National Policy framework for children and young people, Better Outcomes Brighter Future, to fill in the gaps in existing knowledge. This further expands the role that the HBSC study in Ireland has in informing policy and in providing data for assessing its success. The paper will present the indicators that are currently used for both national documents, as well as how these were developed.

Using data from the HBSC study for evidence-based suicide prevention in Luxembourg

Claire van Duin

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Issue:

As suicide is the second leading cause of death for young people, WHO aims to reduce the suicide rate with 10% by 2020 worldwide. In Luxembourg, organization D'Ligue coordinates suicide prevention. Since suicide research has been carried out in the country for a few years only, data on adolescent suicidal ideation is lacking. Therefore, D'Ligue has contacted the Luxembourg team of the international Health Behaviour in School-aged Children (HBSC) study, to identify risk factors for suicide behaviour and derive recommendations from them.

Description of the problem:

First, our practice partner wanted us to provide them with basic data on the suicidal ideation of adolescents: How many adolescents are suicidal and what are risk factors? Second, recommendations for practice should be derived from the results. To this end, the HBSC data (2014) of 5262 pupils aged 12-18 were analysed.

Results:

15.1% of adolescents thought about suicide last year and 7% attempted suicide. Of the 24 risk factors examined, 12 were found to be significant, with three being particularly important: multiple health complaints (OR: 1.3 for each health complaint, $p < 0.001$, CI: 1.18 - 1.33), lower life satisfaction (OR: 1.3 for the loss of each life satisfaction point, $p < 0.001$, CI: 1.17 - 1.33) and frequent physical fighting (OR: 2.4, $p < 0.001$, CI: 1.57 - 3.74).

Lessons:

Risk factors for suicide behaviour known from research have been confirmed for Luxembourg. What is new is that the number of health complaints is the most important risk factor for Luxembourgish adolescents. Therefore, a list of 8 health complaints was validated as a screening tool for suicidal thoughts. In a further step, this tool could be used, for example, by school nurses. The HBSC data can be used to update the national suicide prevention plan.

Main messages:

HBSC data are used to:

- update the Luxembourgish national plan for suicide prevention.
- investigate a screening tool for adolescents at risk for suicide.

School Health Research Network Wales: Development, implementation & contributing to public health policy

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The School Health Research Network (SHRN) was launched in Wales in 2013 as a strategic partnership between Cardiff University, Welsh Government, Public Health Wales (part of the National Health Service) and Cancer Research UK (a research-focused charity). SHRN is led by a multidisciplinary team in the Centre for the Development and Evaluation of Complex Interventions for Public Health Improvement (DECIPHer) at Cardiff University.

SHRN aims to: 1) provide health and well-being data from a biennial survey for national, regional and local stakeholders, including schools; 2) co-produce school-based health improvement research for Wales; and 3) build capacity for evidence-informed public health policy and practice.

Building on and integrating with HBSC infrastructure, a transdisciplinary complex adaptive systems (T-CAS) approach has been employed to develop SHRN, for a national culture of prevention for school health improvement. The T-CAS approach focuses on key stages and activities within a continuous network cycle to facilitate systems level change. The five key stages involve establishing transdisciplinary strategic partnerships, resource investment and linkage, network development, coproduction activities and reciprocal outputs.

SHRN has successfully established new cross-sector stakeholder partnerships at multiple levels, and embedded network activity within national and local policy. It has established a programme of school engagement activities to secure membership of 212 (100%) secondary schools in Wales and building on HBSC systems and structures has developed a national data infrastructure with the biennial collection of student and school-level health and wellbeing data. SHRN has co-produced scientific evidence and established a new data-led planning system (e.g. 56 research studies co-produced). It has also secured sustainability funding from health and education, while developing research capacity to generate evidence and support professional practice.

Learning from success: implementation & evaluation of a national program

Yossi Harel-Fisch

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The WHO - Health Behavior in School-Aged Children (HBSC) cross national survey, has monitored changes in youth alcohol use throughout the past 3 decades in over 45 countries in Europe and North America. While Israel has usually shown relatively low rates of adolescent smoking, drinking and drug use, the rates of problem drinking increased dramatically during the years 1994-2009. The rate of binge drinking in P30D for teens aged 11-15 tripled from 6.2% in 1994 to 20.6% in 2009. Findings were cleverly used to impact policy. The scientific evidence were disseminated to the press and targeted parliament and cabinet members. Consequently, the government funded the development and implementation of a comprehensive, long-term national program to reduce alcohol drinking among youth. The program was funded and implemented in three consecutive stages: 2010-12, 2012-14 and 2014-16 and was coordinated by the Israel Anti-Drug Authority. HBSC data were used as the monitoring system of the program. Activities included: implementing a comprehensive national strategy, building partnerships with relevant agencies, developing consistent and coherent messages, implementing national media campaigns, passing and enforcing a host of new legislation, implementing a wide variety of age and culture-specific school programs, and implementing community-based interventions. HBSC findings show that as a result of this national intensive program, binge drinking by Israeli youth dropped from 20.6% in 2009 to 12.4% in 2011, to 10.7% in 2014 and finally to 6.2% in 2019. All in all, binge drinking dropped to about one third of its magnitude in 2009, prior to the implementation of the national program. The paper discusses the unique role of HBSC in identifying a critical increase in binge drinking, influencing decision makers, providing base-line data for the national program and serving as its evaluation system.

Biosocial perspectives on adolescent wellbeing: time trends and cross-national patterns

Candace Currie

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Since 1985, the HBSC Study has conducted 9 quadrennial surveys. There has been a growing number of HBSC participating countries over the 3.5 decades - from 5 to almost 50, in Europe and North America. In total there have been 298 national HBSC surveys and data collected from more than 1.5 million 11, 13 and 15 year olds. This paper asks - 'What have we found out about adolescent mental health' from this enormous research endeavour?

1000 papers have been published from HBSC and of these, just over 10% (120) have a primary focus on mental health. Notwithstanding the complexity of how mental health is conceptualized in each case, the 120 abstracts were scanned and empirical evidence was organised according to Bronfenbrenner's bio-ecological model in order to synthesise key findings, in order to evaluate: where there were significant contributions to knowledge/understanding of mental health; where this was limited and where real gaps existed.

A vast array of topics was explored on adolescent mental health with a strong focus on the effects of bullying, the school environment and social and economic inequalities. There was a lack of attention to the importance of friendship and prosocial behaviour. Apart from parents, the role of family members, including grandparents and siblings, in supporting or negatively impacting mental health, was neglected. It was concluded that a deeper investigation is needed into behaviours and social contexts that support positive mental health. The use of the bio-ecological model helped to systematise the evidence to provide an overview of what HBSC has achieved in terms of progressing our understanding of adolescent mental health and where gaps exist.

The implications of this review for HBSC's future development are considered in addition to reflection on what contribution the research to date can make to policy development to improve adolescent health internationally.

7.G. Workshop: Implementing cost-effective policies to reduce the burden of alcohol in the European region: national and local experiences?

Organised by: MILDECA, WHO EURO
Moderators: Carina Ferreira-Borges - WHO EURO, Nicolas Prisse - MILDECA

Countries across the European region have very different approaches to alcohol policies and to their implementation. Presentations by different countries/local authorities will illustrate different interventions taken to reduce alcohol consumption and attributable harm, the effective operational strategy, and the various actors mobilised to promote the coherence and efficiency of inter-sectorial public action (i.e education, health, law enforcement, private sectors). This workshop will contribute to further enabling its participants to set or contribute to set efficient policies aimed at reducing the risks and damages related to alcohol consumption. Moreover, the workshop could result in triggering European synergies and contribute to the promotion and effectiveness of such initiatives.

Priority policies and current status of alcohol control in the WHO European Region

Carina Ferreira-Borges, WHO EURO

Promoting the coherence and efficiency of inter-sectorial public action: the experience of implementing minimum unit pricing in Scotland

Louise Feenie
Scotland, UK

Role of local authorities in the alcohol marketplace

Sara Eklund
Sweden

Challenges in implementing comprehensive marketing alcohol control policies: the community perspective

Grazina Belian
Lithuania

Rethinking how to strengthen the health system – the Russian experience

Artyom Gil
Russian Federation

Experience, challenges and support required by local authorities to implement alcohol control policies

Josian Hoareau
France

Panel discussion with speakers, questions and answers
Closing remarks by co-chairs

7.H. Skills building seminar: Population health monitoring goes upstream to improve the uptake of the wider health determinants

Organised by: EUPHA (PHMR), EUPHA (URB)
Chair persons: Nicole Rosenkötter - EUPHA (PHMR), Claudia Costa - Portugal
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Population health monitoring and reporting provides regular and up to date information on health outcomes, health behaviour, and parameters related to health care. If relevant and possible, information is stratified by sex, age and socioeconomic indicators. Finally, the outputs of routine population health monitoring and reporting aim to inform policy makers and other stakeholders to develop healthy public policies and implement health promoting actions.

However, does the processed data and information really help us to develop a strong and effective narrative on how to improve population health? Alternatively, this information might perpetuate a focus on health care and individualistic solutions for health and inhibits us to frame a narrative focussed on the social, political, and commercial determinants of health.

If we (1) aim to follow a Health in All Policies approach, (2) agree that changes in population health can best be reached if health determinants are tackled upstream, and (3) acknowledge that health is mainly determined outside the health sector, we probably miss parts of the picture with our current routine population health monitoring and reporting activities.

In this workshop, we aim to explore data and information sources that have the potential to expand our general monitoring and reporting focus. The first presentation will focus on the living environment and provides an overview on geospatial information like land use, road and rail networks, amenities, and air pollution, available online at EU level. The second presentation puts the focus on health promoting processes within Finnish municipalities. The tool, that follows a Health in All Policies approach, has emerged to a resource that collects and presents this information routinely. The third presentation will discuss methods for involving the community in making decisions about measuring what is important for their own health and wellbeing. It will also discuss taking their ideas forward and identifying validated tools that can be used to measure what the community want. The last presentation highlights the relevance of policy analysis, for example in the area of food and nutrition, and underlines how this analytical approach can be used to communicate actions needed upstream.

Experts from public health authorities and universities are invited to discuss during this skills building seminar how the focus on the wider health determinants and upstream prevention can be strengthened in routine population health monitoring and reporting. The presentations are followed by an interactive part of 30 minutes to discuss the applicability of the presented approaches and further possibilities to broaden the scope of population health monitoring and reporting.

Key messages:

- The data and information usually used for population health monitoring and reporting lacks information necessary to promote a Health in All Policies perspective and to push upstream prevention.
- To frame narratives that underline the importance of the social, political and commercial determinants of health, we need to expand our data and information sources and include policy analysis.

Geospatial data sources to produce new evidence for routine population health monitoring

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Background:

Many public agencies collect geospatial data in relation to Environment and Territorial Planning. This data is harmonized, standardized, made available online, and it is often collected for a group of countries. These characteristics make this data particularly useful for population health studies, yet in public health there is a certain lack of knowledge with regard to this type of data. The large datasets, the data format and the ways to access this data all hamper their use. The aim of this work is to present an overview of geospatial databases that produce routinely available geospatial data able to support population health monitoring and interventions. The process of how to transform this data in evidence at the local scale will also be highlighted.

Methods:

First, we conducted a survey via the websites of international public institutes with relevant geospatial data gathered for Europe. Second, we identified how we could transform the data into evidence relevant to both, population health studies and decision makers, namely at the local level.

Results:

At the EU level, the European Territorial Observatory Network (ESPON), EUROSTAT, the Joint Research Centre and the Environment European Agency (EEA) are some examples of public agencies both producing and offering access to geospatial data. They are responsible for collecting data regarding, e.g., land use, road and rail networks, amenities and pollution.

Although geospatial data has been compiled all over Europe, it can be used to produce evidence at the local level. For instance, it is possible to extract information on the greenspace area at a local administrative level from the Corine Land Cover project, managed by the EEA, and then, measure the share of area per inhabitant.

Conclusions:

Geospatial data have much more to offer than the obvious location factor. It brings new evidence at the local level, supporting studies and empowering decision-makers at all levels.

TEAviisari – benchmarking health promotion capacity-building in Finnish municipalities

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Issue:

In Finland, municipalities are responsible for promoting public health on local level. However, there hasn't been comparable nationwide information on health promotion processes and resources in different municipalities available. In order to enhance evidence-based management, a nationwide online database and user interface called TEAviisari (http://teaviisari.fi/en/) was released in 2010.

Description:

TEAviisari is based on a generic health promotion capacity-building framework consisting of seven dimensions: commitment, management, monitoring and needs assessment, resources, common practices, participation, and other core functions. Each dimension consists of several indicators. TEAviisari aims to make measures taken by local authorities visible and to provide comparable and objective indicators for the management, planning, and evaluation of health promotion activities in different sectors of administration in all municipalities.

Results:

Most of the data are collected biennially with an electronic form by municipal informants, and complemented with register data. Sectors covered are primary health care; comprehensive, upper secondary and vocational education; sport and physical activity; culture; and municipal management. Exceptionally high coverage (76%-97%) supports the quality of the follow-up data. In order to simplify the interpretation, all data are displayed as summary scores ranging from zero to 100, where 100 stands for a desirable quality. It is possible to drill down into more detailed information, all the way down to single indicators.

Lessons:

Our work shows that it is possible to collect comparable data on health promotion practices and resources in municipalities. TEAviisari offers access to relevant, interpreted information for decision-makers on all levels, serving as an assessment and planning tool for the local government, making their actions transparent to the residents, and providing information for national policy-making.

Measuring health and well-being with the help of the community

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Issue:

The Well North Programme is a multi-centre study focused on reducing inequalities in deprived communities through locally-led interventions and activities. As a locally driven project where the local stakeholders were involved in the programme of work, it was important to involve the community when deciding what to measure.

Description:

As part of the evaluation there was a need to produce a tool to capture health and wellbeing information that was relevant to the specific communities involved in the project. In order to do this, we established that we needed local people to define what they wanted to measure, and we would use evidence synthesis techniques to identify tools that could be used to measure it within the community.

Results:

We formulated the Well North Star, a bespoke spider diagram designed to capture individual level data. The Star is a quantitative tool used to collect individual-level data at an individual, organisational and geographical level. Each arm of the star represents an important theme, selected for measurement by local people. Identified local stakeholders (including residents, voluntary sector, police and councillors) were invited to workshops in order to decide what issues were important locally. After group discussions and thematic analysis, up to seven issues were highlighted as the most important in the community. Two of the main issues highlighted within local communities were aspiration and access to local information. After extensive literature search, tools to measure these were insufficient (e.g. aspiration tools focused on aspiration to become famous) and so bespoke tools needed to be created.

Lessons:

When conducting community driven research, it is important to involve representatives from the community in identifying issues that are important to them. There is a gap between what academics and researchers consider important in local communities and what the communities themselves consider important.

Monitoring upstream determinants of dietary health to increase action on nutrition: The INFORMAS initiative

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Background:

Efforts for tracking malnutrition in all its forms are increasing. The World Health Organization conducts regular surveys among Member States on implementation of policies to prevent non-communicable diseases (NCDs) through online databases and interactive maps. However, there are critical gaps. One of the main factors contributing to unhealthy diets is unhealthy food environments. Food environments are the collective physical, economic, policy and sociocultural surroundings, opportunities and conditions that influence people's food habits and nutritional status.

Methods:

The International Network for Food and Obesity/NCDs Research, Monitoring and Action Support (INFORMAS) was founded in 2013 and developed a new framework to monitor and benchmark the healthiness of food environments and policies in a standardized way internationally. The framework consists of 7 modules covering different aspects of food environments (e.g. food composition, labelling, marketing, provision) and two tools (focused on policies and business impact) to measure the extent of implementation of priority recommendations to improve food environments by governments and the private sector.

Results:

To date about 30 countries implemented one or several modules or tools of the INFORMAS framework. INFORMAS has conducted several multicountry comparisons and has developed a blueprint country profile for measuring progress on creating healthy food environments. The proposed country profile aims to supplement similar efforts by the Global Burden of Disease in monitoring health risk factors and outcomes.

Conclusions:

This monitoring fills a gap in the available evidence regarding food environments and policies internationally. Monitoring the healthiness of food environments using key indicators is important to strengthen accountability of governments and food companies, and evaluate the impact of their policies.

7.I. Workshop: Reaching out to engaging the risk groups: online respondent-driven methods for public health

Organised by: Netherlands National Institute for Public Health and the Environment
Chair persons: Aura Timen - EUPHA (IDC), Anna Thorson - Sweden
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Hard-to-reach populations (i.e. those stigmatised, marginalised, underrepresented, or otherwise disadvantaged) such as men who have sex with men and immigrants are at higher risk for infectious diseases. Reaching these populations, studying their behaviour and/or testing individuals for infectious diseases is essential for developing effective prevention programmes and disease surveillance. These populations, however, lack sampling frames making it difficult to collect representative quantitative data using common probability-based sampling methods. Respondent-driven sampling (RDS), a variant of snowball sampling, is an effective method to recruit these populations and to make unbiased population estimates using a statistical model. RDS starts with recruiting a convenience sample of the target population (so-called "seeds"). These seeds are then asked to recruit a number of other eligible individuals of their social network. This process continues which leads to chains of recruitment, with several waves of recruits.

The process of respondent-driven recruitment is very similar to the way infectious diseases such as influenza and mumps transmit through populations. This provides opportunities to use the method with a different aim: the detection of cases within networks. Finding infectious cases is an essential element for prevention of further spread in the population and individual health consequences. Essential as it is to public health, conventional contact tracing is a rather timely, costly and, up to a certain degree, really frustrating activity. Studying and making use of social networks may help to understand and control the spread of infectious diseases transmitted via direct contact. These diseases do not spread at random through a population, but follow the underlying patterns of contact networks. This entails that cases tend to cluster by time and space, and their contact persons are at a higher risk for infection. Same as with RDS, respondent-driven detection (RDD) starts with individuals being asked to recruit relevant contact persons from their network. These contact persons are then asked to do the same, resulting in successive waves of contact persons. A case is reached through contact with a known case, similar to pathogens spreading through these contact relationships. RDD may therefore enhance conventional contact tracing, providing further insight in the extent of outbreaks, in a quick and less laborious manner for public health professionals.

Using three examples from public health practice, this workshop provides participants insights in the methodology of online respondent-driven methods (RDS and RDD), how these provide behavioural and epidemiological knowledge on networks and the spread of infectious diseases, and highlights pre-requisites for successful implementation in practice. Lastly, an interactive discussion will be held with the audience on how attendees can apply these methods for their own public health challenges.

Key messages:

- RDS is used to sample hard-to-reach populations to collect their social, sexual and behavioural information, and to make unbiased population estimates.
- RDD is used to detect infectious cases or clusters of disease.

Example A: Using online respondent-driven sampling among men who have sex with men in Vietnam

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Men who have sex with men (MSM) represent a key population at enhanced risk of sexually transmitted infections including HIV. HIV incidence rates are increasing amongst MSM in Vietnam. The last prevalence rates estimates range between 4% and 12% in major cities (2014). High rates of syphilis, chlamydia and gonorrhoea have also been reported, including drug resistant gonorrhoea. MSM face a strong cultural stigma, especially predominant in rural areas, which make them hard-to-reach in relation to preventive activities. In this context, respondent-driven sampling (RDS) becomes an efficient solution for sampling as well as for testing health promotive interventions. The high Internet penetration rate makes web-based RDS to enable sampling as well as testing risk reduction interventions, an appealing alternative to reduce costs, increase data reliability and to facilitate project management of complex study designs. In this talk, we will present and discuss the implementation of a nation-wide webRDS study of MSM in Vietnam aiming to collect self-reported sexual health and risk behaviour information. Using the same web-RDS system, we combine RDS with a double-blinded randomised controlled trial to implement an online intervention based on the participants own responses to encourage self-reflection. The system allows us to follow up respondents for several months after the initial intervention to check the consequences of the intervention on individual behaviour over time.

Example B: Using online respondent-driven sampling among Moroccan immigrants in the Netherlands

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The Dutch Health Council recommended chronic hepatitis B (HBV) screening for first-generation immigrants originating from intermediate/high HBV endemic countries. The Council proposed two screening strategies; individual case finding by general practitioners and local screening programmes. Our aim was to explore knowledge and information needs regarding chronic HBV and its screening among Moroccan immigrants in the Netherlands, in order to provide Dutch Municipal Health Services insights on how to inform immigrants. We also studied a randomized recruitment method using respondent-driven sampling (RDS) for a better understanding on how to reach and recruit immigrants for an online questionnaire.

First- and second-generation Moroccan immigrants were asked to fill in an online questionnaire and forward this to four Moroccan contacts. Participants were randomized to one of three recruitment strategies; no incentive for filling in the questionnaire nor for successfully recruiting each contact, an incentive for filling in the questionnaire and for successfully recruiting each contact, and a gamified element as non-monetary incentive to stimulate peer-recruitment.

Preliminary analyses show a sample of 59 Moroccans (17-59 years), of which 63% was second-generation and 76% was female. Of these, 46% would like to have information about chronic hepatitis B, while the average knowledge score was 5.02 (0-10). Over 60% of the participants intends to participate in chronic HBV screening, and would also recommend this to their (grand)parents. Using a monetary incentive seemed to be the best recruitment strategy in terms of the number of waves (max: 3). A gamified non-monetary incentive was least effective in stimulating peer-recruitment (max: 0).

Despite the limited level of knowledge and information need, the majority of Moroccan immigrants had a positive screening intention. The next step is to determine whether our methodology could be applied to reach other immigrant groups.

Example C: Using online respondent-driven detection for communicable disease control

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Online respondent-driven detection (online-RDD) is a novel method of case-finding that may enhance contact tracing (CT). However, the opportunities and barriers of online-RDD for public health practice have not yet been investigated from the perspective of public health professionals (PHPs). Therefore, it is unclear what the potential strengths and limitations of online-RDD for CT are.

We conducted a sequential exploratory mixed methods research. First, we conducted semi-structured interviews with Dutch PHPs involved in CT. Questions were derived from the diffusion of innovations theory. Second, we distributed an online-questionnaire to 260 Dutch PHPs to study the main findings in a larger population. We used hypothetical scenario's (scabies, shigella, and mumps) to elicit PHPs' perceptions of online-RDD.

Twelve interviews were held. Response rate to the online-questionnaire was 31% (n = 70). Four themes related to characteristics of online-RDD that influenced PHPs' intention to adopt online-RDD emerged: advantages over traditional CT, task conflicts and opportunity costs, public health risks, and situational compatibility. PHPs believed online-RDD may enhance CT through increased reach, low-key communication options, and saving time. Limitations were foreseen in the delivery of measures, supporting patients and contacts, missing information and contacts, and causing unrest. Online-RDD may be particularly applicable in situations with digitally skilled and literate target populations, low urgency, low time-pressure, and a simple perspective for action. A majority of PHPs (70%) had a positive adoption intention towards online-RDD.

PHPs perceived online-RDD as beneficial to public health practice. Further development of online-RDD should focus on facilitating opportunities for personal contact between PHPs, patients and contacts. A comparative study of 'traditional' CT and online-RDD could yield further insights in the potential of online-RDD for public health practice.

7.K. Workshop: Leaving no one outside: strategies for improving delivery of care undocumented migrants in Europe

Organised by: Platform for International Cooperation on Undocumented Migrants (PICUM)
Chair persons: Alyna Smith - Belgium
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A number of recent publications, including WHO's Report on the health of refugees and migrants in the WHO European region: no public health without refugee and migrant health (2018) and the report of the UCL-Lancet Commission on migration and health have underscored the ways in which vulnerability to poor health outcomes can be exacerbated due to factors related to migration and migration status.

This workshop will explore opportunities to improve delivery of health care, using a practical tool intended to support the design of inclusive health services. This checklist has been elaborated by a coalition of organisations (''Nobody Left Outside'' platform) centred on the situation and needs of underserved populations, including the homeless, sex workers, prisoners, people who use drugs and undocumented migrants. This workshop will aim to test and validate the tool, looking at a particular population: people who are undocumented.

The workshop will aim to:

- Improve understanding of factors that undermine delivery of health services to severely underserved groups, focusing on the specific example of people with insecure residence status.
- Promote understanding of service-design strategies that broadly benefit these groups, applying and validating a practical tool to support inclusive service delivery.

Format: The workshop will aim to be as interactive as possible. Following opening interventions from experts, participants will be invited to share their insights and expertise to validate the service delivery design checklist that will be shared with them, and to identify the necessary policies and practices that wold ensure its effective implementation.

Key messages:

- Test a solutions-based model for the design of health services that addresses underserved groups, focusing on undocumented migrants.
- Identify policies and actors needed to enable effective delivery to ''left behind'' populations.

Santino Severoni

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Dr Severoni will present perspective from the World Health Organization on its priorities on UHC and the SDGs, and how these intersect with its work on migrant health at the European and global levels; and the opportunity of the NLO checklist as a tool to support these goals at the national and local levels.

Jeffrey Lazarus

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Professor Lazarus will provide an introduction to the NLO checklist, the rationale for its creation, its intended application, including advancing the Sustainable Development Goals and countries' commitments to achieving universal health care, and its grounding in the WHO Health System's Framework.

Daniel Lopez-Acuña

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Dr Lopez-Acuña will present opportunities to advance health equity by making health systems more accessible for people in situations of heightened vulnerability, including due to irregular status, through actions at the local, regional and international levels.

Alyna Smith

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Ms Smith with discuss the range of structural barriers confronted by people who are undocumented, in accessing health services, at the policy and practical levels, including intersectional challenges (e.g., for undocumented sex workers, homeless, users of drugs, etc.).

7.L. Workshop: Making progress in Health Impact Assessment: from theory to practice

Organised by: EUPHA (HIA), EUPHA (ENV)
Chair persons: Piedad Martin-Olmedo - Spain, Peter Van Den Hazel - EUPHA (ENV)
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Nowadays, it is widely accepted that the causal pathway leading to an adverse health outcome does not depend on isolate risk factors but on the intricate relation of those elements with broader socioeconomic, cultural, environmental, and political conditions. This comprehensive approach was already acknowledged in the preamble of the constitution of the World Health Organization (WHO) when referring to the concept of ''health''. The so-called social view of health generated under this new framework place also a great emphasis in addressing health inequalities within a population.

Impact assessment (IA) is a discipline involving specific methods and technical tools for analysing the consequences of a planned intervention previously to the implementation phase. Its purpose is to support the decision-making process. Environmental Impact Assessment (EIA) is a form of IA applied to a wide range of public or private projects that are likely to pose a significant impact on the environment.

The EIA Directive (2011/92/EU) was amended in 2014 (2014/52/EU), including explicitly ''population, and human health'' in the list of topics to be considered in an EIA. However, the amended directive does not provide a specific definition for any of the two terms, nor guidance on how to assess the potential health effects related to a project, or the necessary qualifications of professionals tasked with the assessment of these effects. To this respect, public health professionals are not likely to be routine contributors to EIA. In this sense, under a business-as-usual coverage, environmental specialists are the professionals developing standards and methods to assess all topics in EIA, including for population and human health. This runs the risk that EIA practice will lose much of its potential for improving human health.

The International Association for Impact Assessment (IAIA) together with the European Public Health Association (EUPHA), and the WHO European Centre for Environment and Health (WHO-ECEH) are working on a reference document to support public health authorities and other health stakeholders in addressing human health within EIA as required by the Directive 2014/52/EU.

The aim of this workshop is to present that document and discuss with participants about the above-mentioned gaps, for ensuring a consistent coverage of population and human health within the EIA process.

Elements to be discussed:

- -Description of major changes introduced by the amended EIA directive, and its impact on public health
- -Institutional/political support needed for the institutionalization of health assessment within EIA
- -Role of the Public Health sector, and description of what likely or significant effect on health should be considered within EIA
- -Competencies required for assessing population and human health in EIA.
- -Gaining strength from the 'Family of health assessments' approach''

Key messages:

- A comprehensive approach to population and human health should be incorporated in the EIA procedure.
- Raise awareness for involving public health sector in addressing population and human health in EIA.

The amended EIA directive creates opportunities for public health

Ben Cave

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Environmental Impact Assessment (EIA) is conducted by the developer as part of the process of seeking consent to proceed with the project. The developer may be a public authority or a private company. The Directive for Environmental Impact Assessment (EIA) (2011/92/EU) was amended in 2014 (2014/52/EU). The changes are now transposed into national regulations across European Union Member States. These changes have an influence beyond EU borders, for example, through the policies of the European Investment Bank and the European Bank of Reconstruction and Development. The amendments to the Directive create both opportunities and challenges for public health. The opportunities stem from the changes that have been made to the Directive. Population and human health are now on the list of core topics that must be considered in an EIA. The other core topics to be assessed are each 'determinants of health', for example: biodiversity; land, soil, water, air and climate; and material assets, cultural heritage and the landscape. The Directive now requires the interaction between these factors to be considered. The amended Directive includes other issues that are relevant to human health, for example, climate change and vulnerability (exposure and resilience) to major accidents and/or disasters. The developer's assessment must be prepared by Competent Experts. The changes also pose challenges. These are technical. For example, human health needs to be assessed within the framework of EIA. The changes also pose challenges to the public health workforce. There is a need to ensure there is capacity to participate in EIA. The EIA is typically prepared by the developer and reviewed by the competent authority. There is a role for public health expertise in these complementary activities. This presentation will focus on the opportunities created by the changes to the Directive and the opportunities this creates. It will also touch on the challenges.

Political support for the institutionalization of health assessment within Environmental Impact Assessment

Francisco Javier Rodríguez Rasero

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Health Impact Assessment (HIA) as a stand-alone report integrated in environmental impact assessment has been compulsory for the last 5 years in Andalusia. In this time, it has been proven as a successful tool for implementing the Health in All Policies strategy, delivering consistently better outcomes for the examined projects.

The effective implementation of HIA required huge institutional and political support as this choice was very controversial and sparked opposition from developers. They alleged it would worsen the adverse socioeconomic situation and made claims about how it would generate unfair competition for companies in the region.

Nevertheless, the main source of opposition was located within administrations, unaccustomed to collaborative work. There were also fears about the increased bureaucracy and lack of coordination in procedures. It was a major challenge, as it seemed conflicting with other political objectives as achieving economic growth and job creation, while offering doubtful political gains due to difficulty in achieving results in the short term.

The support implied assuming a political leadership focused on the inclusion of health in the government's list of priorities, advocating for the population value as a strategic element. It also meant raising awareness among all sectors by searching for strategic alliances and being prepared to compromise and reach agreements.

It needed technical and organisational leadership too. First, by defining a feasible model of HIA, and then by building bridges between the different sectors. Regarding coordination, several joint instructions have been drawn up to clarify the activities that each organization must undertake, including deadlines and persons in charge. Finally, other successful strategies have been the development of facilitation mechanisms and the provision of specific training courses for developers and administrative staff.

Role of the health sector in EIA

Marco Martuzzi

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EIA is an obligation for many projects in many countries. Consideration of human health within EIA is also an obligation. This results in an invaluable opportunity for early consideration of a variety of environmental health determinants, leading to minimization of noxious exposures and promotion of the salutogenic factors involved in plans and projects in many sectors. In other words, EIA can be an extremely powerful vehicle to scaling up primary prevention - by far the most effective strategy in public health. This opportunity is further enriched by the recent revision of the EU Directive on EIA, which makes better provision for human health considerations in EIA, in particular referring to the need to address "significant" health effects of plans and projects - without elaborating further.

The health sector can play a key role in EIA by: recognizing the opportunity and its potential, so far under-exploited; engage in dialogue with other sectors, on specific applications; make institutional arrangements so as to secure manpower and competences to contribute to EIA; advocate for a high level of human health consideration in EIAs on the ground.

This process requires careful consideration of needs and constraints of EIA, including a need to establish a common language with other sectors, the identification of realistic, achievable goals, as well as long-term objectives, the consolidation of available methods and tools and a need to engage in possibly unfamiliar conversations. A pragmatic, operational decision on what constitutes significant health effects in the context of EIA may be a good starting point to measure the readiness of the health sector to undertake this journey.

Skills and knowledge to facilitate competence for health and wellbeing in Environmental Impact Assessment

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Within Environmental Impact Assessments (EIA) any health impact assessed has routinely focused on environmental and socio-economic health determinants i.e. air quality/ emissions. However, the WHO recognises that health is much wider than this and health is influenced by a broad range of determinants, contexts, inequalities and experiences. Proposed development can affect a wide range of population groups and their health and well-being in diverse and significant ways.

The revised EU EIA Directive contains amended wording in relation to health consideration but also now requires 'competent' persons to undertake assessments. Competency can mean different things to different people but a clear set of standards, criteria and appraisal tools, training and professional competence and abilities are needed in order to be explicit to measure this and articulate how competence should be demonstrated in practice.

Findings:

This paper describes a clear set of expected skills and knowledge outcomes that competent practitioners and multidisciplinary teams need to exhibit; which policy makers and commissioners need to seek; and which reviewers should expect see applied, in order to ensure that high quality, fit for purpose EIAs are carried out which include the widest interpretation of health, wellbeing and inequalities. It discusses the work of the Wales HIA Support Unit to train and mentor practitioners and organisations and presents resources to enable this such as its Skills and Knowledge Development Framework, which provides a pathway to develop and support competence in practice, and the Quality Assurance Review Framework for HIA.

Conclusions:
To enable competent broad holistic assessments to be carried out a clear set of criteria, tools, resources and training opportunities are needed in order to enable and facilitate a wide range of personnel to deliver a wide and inclusive health appraisal as part of EIA.

Health in Environmental Impact Assessment (EIA): Gaining strength from the 'Family of health assessments' approach

Rainer Fehr

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Background:
For connecting health-related ''scientific knowledge'' and ''policy-making'' with each other, there is a range of approaches, including health reporting, health needs / impact / technology / systems performance assessment as well as evaluative activities. The improved understanding of their communalities and differences provides opportunities for mutual learning and synergetic practice.

Goal and method:
The goal is to strengthen the coverage of health within EIAs. We apply the ''Family of health assessments'' approach, as worked out by the EUPHA ''health assessments'' working group (EJPH 2017, pp.609-16), for connecting EIA to other approaches used to support decision-making.

Results:
Applying this ''family'' approach leads to various insights, including the following: (i) Existing local health (or environmental) reports provide baseline information, as required in impact assessments. (ii) An existing Health Needs Assessment (HNA) can point to vulnerable populations, Health Systems Performance Assessment (HSPA) to specific weaknesses of local health care, potentially relevant for expected impacts. (iii) Where other impact assessments beyond EIA, e.g. Social Impact Assessment (SIA), are conducted, assessors need to be aware of potential overlap or even contradictions which could irritate decision-makers and the public. (iv) Ex-post evaluations of similar projects can inform prospective EIA. (v) The competencies required for assessing human health in EIA overlap with those required for other types of health assessments, e.g., health reporting or evaluation. Therefore, teaching modules might jointly be developed.

Lessons:
The ''family'' perspective helps to make best use of existing (local) knowledge (which is often embedded in diverse forms of health assessments); and to assure consistent practice across assessments. The inter-relationship of health assessments is a reason to reconsider training courses and to develop more integrated approaches.

7.M. Workshop: Cohorts: coordinated tools for decision support

Organised by: French National Institute of Health and Medical Research
Chair persons: Charles Persoz - France
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Longitudinal cohorts, by allowing to follow over the time a group of persons with common characteristics to identify the occurrence of health events, have proven to be very valuable instruments in medical and public health research. For instance, it is possible to investigate links between exposures (demographic, biological, behavioral, environmental, or genetic) and the occurrence of observed health events. And indeed the applications of the cohorts are multiple: besides public health research (links between risk factors or exposures and disease, health effects of unusual or still unknown exposures), it is possible, for example, to investigate the impact of a therapeutic strategy or complex healthcare intervention on the population status. Therefore, observations resulting from cohort studies are now often at the heart of public policy decision-making.

In addition, health-data collections are increasingly broad in our societies (data from research, care, patient communities, or using personal initiatives such as smartphone applications and connected objects) and heterogeneous (genomic, physiological, biological, clinical, social and environmental). However, the efficiency of these epidemiological studies is limited by many factors, while resources required to develop them are very important. The lack of knowledge of the European landscape, the lack of harmonization of practices or governance or the lack of communication between various stakeholders, have an impact on the strategy to adopt. It would be essential to consider procedures to optimize resources, harmonize methodologies and coordination between structures, in such a context where epidemiological expertise is sometimes scarce and under-resourced. Furthermore, possibilities of international cross-cohorts linkages and collaborations could allow for unique and fruitful research opportunities, impossible to achieve in the setting of a stand-alone cohort.

During this workshop, we propose to present different European initiatives and coordination models, but also to highlight collaborations between these cohorts. This brainstorming would allow us 1) to expose methodologies and best practices, which are developed by the various stakeholders; 2) to identify common or transposable procedures in order to participate in sustainable European strategy and at last, to address the challenges of developing future cohorts and using personal health data. For this purpose, four speakers will present the French landscape developed over the past ten years and three models of cohort coordination and data mining in Europe: the French cohort Constances, the Swedish consortium Cohorts.se and the German National Cohort.

Each participant will speak for 15 minutes. Then the chairperson will lead the workshop's joint discussion with the four speakers and the audience.

Key messages:
- cohorts are one of the reference instruments for epidemiological and public health research, and represent a significant advantage in decision support.
- efforts are need to improve the coordination of these cohorts, both nationally and internationally, to sustain these expensive instruments and foster the development of international collaborations.

Development of a French ecosystem to support cohorts

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For a long time, the usual research funding mechanisms in France limited the development of very large databases (funding too low or too short for example). Over the past decade, new measures provided unprecedented momentum in our country to structure large cohorts.

Due to their very broad scope, cohorts are one of the reference instruments for epidemiological and public health research. Cohorts also help to inform decision-making on risk prevention action, enhance the health system or patient care. For these reasons, the French Ministry of Research identified in 2008 cohort as research infrastructures. With this decision, the Ministry recognizes their usefulness for the public health research community, and more broadly for biomedical research. To fund this ambition, a call for proposal was launch in 2010 by the government as part of the 'Investments for the Future>>. A dozen patient or general population cohorts are funded through this process, such as Constances, E4N or others.

The creation of the National Health Data System in 2017 also reinforces the strategic aspect of cohorts. This system is unique in Europe. He allows cohort data to be linked with data from health insurance, hospital data, causes of death, disability data and supplementary health insurance organizations. The challenge of artificial intelligence also follow the analysis of this data flow.

This model is part of a national strategy with several initiatives: joint coordination, shared services (France Cohortes), the France Médecine Génomique plan and the Health Data Hub, as well as the recently announced launch of 4 Institutes for Artificial Intelligence, three out of them having exploitation of health data at the heart of their development strategy. The objective of this intervention will be to present this french integrated model, and mechanisms developed, in terms of tools, resources or staff, at the service of cohorts and researchers.

The Constances cohort

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The overarching objective of CONSTANCES is to constitute a research infrastructure based on a large population-based cohort to serve as a versatile, high quality and efficient platform for population health research. Constances is designed as a representative sample of 200,000 adults aged 18-69 at inception living in different regions of France. CONSTANCES, which is accessible to the national and international research community, enables the conduct of valid and well-powered studies in a wide range of scientific domains. For each participant, it combines detailed data collection at baseline, englobing lifestyle, environmental, social, and medical history information, with medical examinations, neuropsychological testing with the added advantage of linkage with two major national administrative data bases (SNDS and CNAV). Further, CONSTANCES collects information about changing lifestyles, environments, health behaviors and health conditions on a prospective ongoing basis. A biobank of blood and urine samples is in the process of being constituted. As of April 2018, 85 nested projects designed by French and international teams in many areas of biomedical and public health research were initiated. Constances participates in several French and international consortiums. We established relationships with public health institutions and industrial companies. In the next years, we plan to continue longitudinal follow-up CONSTANCES along the same lines by extending the follow-up of the cohort and by developing innovative new themes prioritizing the strengthening of certain ''niches'' where CONSTANCES can have international leadership.

The Sweden cohort consortium (Cohort.se)

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The scientific literature is continuously flooded with non-replicable results from underpowered studies. The insight that very large sample sizes are needed in order to generate robust results has led to the establishment of very large cohorts and cohort consortia in the last decades. Sweden is a country with unique opportunities for epidemiological research. Sweden has a large number of carefully collected population-based cohorts that have been followed for decades, ongoing recruitment into several cohorts, and a variety of high-quality national socio-demographic and medical registries covering the whole population since many decades. However, Swedish cohort research is poorly coordinated. Many research projects are underpowered by using only one cohort at a time, leading to uncertain results with little benefit to patients and the public. We have proposed a coordination of all Swedish cohorts in a common national infrastructure, the Swedish Cohort Consortium (Cohorts.se), aiming to facilitate greater use of Swedish cohorts for better-powered research. Coordination of all Swedish prospective population-based cohorts in a common infrastructure would enable more precise research findings and facilitate research on less common exposures and outcomes, leading to better utilization of study participants' data, better return of funders' investments, and higher benefit to patients and populations. A standing Swedish cohort consortium may drive development of epidemiological research methods and strengthen the Swedish epidemiological competence, community, and competitiveness.

The German National Cohort: aims, study design and current status

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The German National Cohort (GNC) is a joint interdisciplinary endeavour of the Helmholtz and the Leibniz Association, universities, and other research institutes. It focuses on the causes of major chronic diseases, i.e. cardiovascular diseases, cancer, diabetes, neurodegenerative/psychiatric diseases, musculoskeletal diseases, respiratory and infectious diseases, and their sub-clinical stages or related functional health impairments. Less frequent disorders may be investigated by pooling studies. Random samples of regional populations were drawn by 18 study centres, including a total of 200,000 women/men aged 20-69 years. Starting in 2014, the baseline assessments included an extensive interview and self-completion questionnaires, a wide range of medical examinations and the collection of blood, urine, stool and nasal swabs stored in a central biorepository. A random subgroup of $\geq$ 40,000 participants participated in an intensified examination (''Level 2'') programme. Also, about 30,000 participants, who were in addition invited to Level 2, participated in a magnetic resonance imaging examination programme. In 2018 we began to invite all participants for a re-assessment that will be completed in 2023. Information about chronic disease endpoints is obtained through a combination of active follow-up (mailed questionnaires every 2-3 years) and record linkages with cancer registries, healthcare databases, the statutory pension fund and other social insurance data. The examination and questionnaire modules are partly harmonised with those of other large European cohorts to facilitate collaboration. Data access requires a formal application by researchers and will be granted according to the use-and-access regulation of the GNC. The GNC is planned for an overall duration of at least 25-30 years. It will provide a major epidemiological resource, and will help to identify new and tailored strategies for early detection, prediction, and primary prevention of major diseases.

7.N. Workshop: Health literacy: an asset to public health policy

Organised by: EUPHA (HP), Bielefeld University, NIVEL, CAPHRI at Maastricht, University, Newcastle University, Global Health Literacy Academy, M-POHL Network WHOChair persons: Orkan Okan - EUPHA (HP), Jany Rademakers - Netherlands
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Health in all Polices (HiAP), the Sustainable Development Goals (SDGs), the social determinants of health, and health equity all have been recently linked with health literacy. Therefore, it comes as no surprise that health literacy has taken a place in many policy documents in the European Union`s member states. Several national, regional and local health literacy strategies are proof that many governments consider health literacy to be important for their national public health goals. The policy interest in health literacy is also well-documented within countries of the WHO Euro Region, where the political commitment to address health literacy is currently rapidly increasing. Accelerated by the WHO and several of its departments, the uptake of health literacy on policy agendas led to various new activities, such as two policy-related ''Action Networks'' and a ''European Roadmap''. In the light of those recent events, the relevance of health literacy for public health, health promotion and digital health has attracted further NGOs and cross European networks to include health literacy to their working programmes and policy agendas.

In this context, our aim is to: (1) present empirical findings from health literacy policy research projects conducted on European and national levels in the WHO Euro Region and (2) initiate a critical discussion among the audience and the presenters.

The 1st presentation will provide a general overview on health literacy policy initiatives in the EU and the WHO Euro Region, showing interesting results on how most policies focus on health care rather other important arenas of everyday life. The 2nd presentation will compare data from two different European health literacy studies and share in-depth knowledge on the specific policy strategies European countries use, such as national, regional and local level policies, or if countries don`t use health literacy in their health policy frameworks. The 3rd presentation will build upon these presentations and provide results from a health literacy policy analysis regarding children. This is to see if and how health literacy policies address children and what kind of policies and policy instruments are used. The 4th presentation will explore how health literacy is applied in context of cancer. The study will discuss results of systematic analysis of National Cancer Control Plans (NCCPs), which is a public health strategy, regarding cancer literacy and the improvement of quality of life of cancer patients. The 5th presentation will introduce the WHO action network for measuring population and organizational health literacy (M-POHL) and its health literacy survey 2019 (HLS19), an initiative that emerged in context of European health literacy policy making and already comprises 24 European countries.

This workshop offers a forum for people interested in public health policy making with a specific focus on health literacy and will allow discussing results, facilitate exchange, and support further synergies.

Key messages:

- Health literacy policy is an important brick in the Health in All Policies strategy.
- This workshop will address health literacy policy development on national, European and global levels in different populations.

Health literacy policy to promote public health in Europe

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Background:

Health literacy is gaining increasing attention as a means of promoting individual- community- and population-level health, and is key to delivery of the European Health 2020 policy. European policy frameworks promote a holistic approach to policy at multiple levels in society and across multiple arenas in every-day life.

Methods:

An evidence synthesis was undertaken to describe health literacy policies in the WHO European Region: their distribution, organizational levels, antecedents, actors, activities and outcomes, along with the factors influencing their effectiveness. Evidence was obtained by a scoping review of academic literature in English, Dutch and German and of grey literature in English, Dutch, German and Italian, supported by a Region-wide expert enquiry. Emerging findings were presented to representatives from 19 Member States of the Region to check for accuracy and omissions.

Results:

The report highlights much good health literacy policy-related activity, mostly in the health and education sectors. Fewer policy-related activities were identified in other areas, such as the lived environment, employment, the media, and digital health. Robust evaluation of policy-related activities was identified in some, but not all, policies.

Conclusions:

Suggestions are made for policy-makers to share good health literacy policy practice, and to further develop policy aims and activities across all societal areas. An additional need is the development of robust health literacy metrics to direct resources and monitor the effectiveness of policy activities.

Health literacy policies and activities: developments in the past five years

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Background:

In the past five years, two inventory studies have been performed in which health literacy policies throughout Europe were described and analyzed: the 'Study on sound evidence for a better understanding of health literacy in the European Union'(HEALIT4EU, 2015) and the recent HEN-synthesis report on the evidence on existing policies and linked activities and their effectiveness for improving health literacy (2018). In this presentation, data from these two studies will be compared to identify current developments regarding health literacy policy.

Methods:
The descriptive data of both studies were, amongst others, compared with respect to the number of countries with policies or activities regarding health literacy, the geographical distribution over Europe, the content of the policies and level of implementation.
Results:
More countries have developed policies and activities in the domain of health literacy, or are currently in the process of doing so. However, gaps remain in the geographical distribution of policy, and evidence on the effectiveness of policies and activities is still marginal.
Conclusions:
Health literacy is more prominent on the European policy agenda. Rigorous evaluation is needed to demonstrate possible benefits of the policies for individuals, communities and society as a whole.

Health literacy policy-making regarding children and adolescents

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Background:
There is an on-going and a well observable uptake of health literacy in the national and international agenda setting pertaining the development of new policy strategies to address the issue of promoting health literacy in whole societies. Even though children have been declared to be a priority target, no research is available that has analysed if and how children are addressed by these policy approaches. Therefore, the aim of this research is to analyse those policies on how they address children.
Methods:
Policy documents on national levels that have been published by February 2019 were retrieved by using a two-pronged strategy comprising of (1) systematic review methods (database and online search) and (2) expert consultation.
Results:
The search has identified 26 policies for 19 countries including case-laws and enacted statues, governmental strategies, polices driven by national key experts, and educational policies. No policies on children's health literacy were found for South America and Africa. The policies differ in many ways, such as their embedding into general health policy making, policy and implementation processes, rationality and networks, and influence of governance. Children are either addressed by (1) specific programmes, (2) school health approaches, (3) their parents, (4) healthcare action, or (5) using a combination of those areas. However, there is almost no evaluation data available nor are these policies underpinned by health literacy evidence generated within the childrenˋs population. Most policies are designed for adult populations rather than children.
Conclusions:
Health literacy has developed into an important health policy-making target. While almost all policies address children somehow, several limitations make it difficult to evaluate the quality of the different policies. To secure and sustain more effective, child-focused policies, current knowledge gaps regarding research on childrenˋs health literacy should be addressed.

Cancer literacy applied in national cancer control plans – from policy to strategic guidelines in the EU

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Background:
The study concerned a systematic analysis of National Cancer Control Plans (NCCPs) regarding cancer literacy. A national cancer control programme (NCCP) is a public health strategy designed to reduce cancer cases and improve quality of life of cancer patients. Cancer literacy is critically important for cancer patients who must make a complex set of diagnostic and treatment-based decisions at times of physical and emotional distress. Yet, it is unclear to what extent cancer literacy is reflected in cancer strategies such as the NCCPs.
Methods:
The aim was to identify NCCPs from the EU to explore if health literacy or cancer literacy was included as a strategic priority. The NCCPs were retrieved in August to November 2018 from online portals as well as through key informants specialised in public health and health literacy.
Results:
The data collection yielded 45 NCCPs of which 31 originated from the EU Member States. The document analysis revealed that six out of 45 NCCPs specifically included the term health literacy. The countries concern Austria, Belgium, Germany, Portugal, New Zealand and Maryland, the U.S. In addition, only one NCCP entailed the term 'cancer literacý, namely the plan from Maryland focusing on 'oral cancer literacý, specifically.
Discussion:
Although, it is politically recognized that improving the health literacy of the population can be an effective strategy to promote a more (cost)-effective use of the healthcare services and population health the study of NCCPs revealed that 'health literacy' in general and 'cancer literacý in particular, have not yet been commonly implemented as part of NCCPs. The countries who have actively mentioned health literacy, were all countries where health literacy is on the political health agenda in various ways.

The action network for measuring population and organizational health literacy (M-POHL) and its Health Literacy Survey 2019 (HLS19)

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The first European comparative survey of population health literacy (HL), HLS-EU, triggered a lot of health policy and health systems responses. In the sense of ''What doesn't get measured doesn't get done'', data seem important to capture the attention of decision makers and to support evidence-informed policy and practice. This is one of the reasons why the WHO publication ''Health Literacy - The Solid Facts'' (2013) demands regular internationally comparative surveys of HL.

Building up on initiatives by HLS-EU researchers and the German-speaking WHO member states, the Action Network on Measuring Population and Organizational HL (M-POHL) under the umbrella of WHO Europe's Health Information Initiative (EHII) was founded in 2018 to achieve this aim. M-POHL's objectives are to support regular measurements of population HL and of organizational HL and to use the results to support evidence-informed policy and practice. A unique feature of M-POHL is that it brings together research and policy: countries typically participate with a research and a policy representative. Experiences so far show that policy representatives in M-POHL find the continuous collaboration with research extremely valuable for maintaining momentum around HL in their respective countries. So far, 24 countries have been involved in M-POHL.

M-POHL uses projects to meet its objectives. Its first project will be the next European comparative survey of population HL, abbreviated as ''HLS19''. This will build up on HLS-EU by using a standard short form of the survey tool for all participating countries, completing it with optional packages on new topics (digital HL, communication and orientation in health care), and allowing for a few country-specific items. Data collection for HLS19 will start in autumn 2019 and last until March 2020. Based on current expressions of interest, between 10 and 14 countries will participate in the survey. An internationally comparative report will be available in 2021.

7.O. Round table: Academic institutions and regional governments: two worlds apart?

Organised by: WHO RHN, Østfold University College, Norwegian University for Life, SciencesChair persons: Francesco Zambon - WHO EURO
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Partnerships can be described as voluntary, equal and binding agreements between different stakeholders about cooperation and efforts towards a common goal. Partnerships are especially seen as a necessary and important factor within governance and for solving complex ''wicked problems''. This is reflected both in the European health policy framework Health 2020 and in the 2030 Agenda for Sustainable Development, where the development of partnerships is described as an important tool for achieving goals and obtaining sustainability. Partnerships between regional governments and academic institutions could be especially important, as many countries in Europe delegate power and responsibility for public health to the regional and local level. As regional academic institutions have local knowledge, they might be in a better position for adding more value into collaboration with the health professionals and policy makers working in regional governments.

However, public health partnerships between regional governments and academic institutions are not straight forward, as the operationalization, conceptualization, and prioritization of public health issues varies across sectors. Several pitfalls for successful partnerships have also been identified, such as hidden unwillingness to share information or resources, rapid policy and organizational shifts, resistant 'silo mentality', and difficulties to establish evidence of impact. When partnerships are made between academic environments and the practical level in the public sector, different views upon what is actually knowledge and evidence, and how to translate knowledge into practice, lead to challenges.

In this workshop, the complex relationships between academia and practice are discussed, both by examining advantages and by taking a critical stance. The results from a survey of 31 regions within the WHO Regions for Health (RHN) on partnerships will be presented, describing the occurrence of partnerships, how public health partnerships are formalized and organized, important enablers, how collaborations are carried out in practice, perceived benefits and success, and experienced challenges. This will further be elaborated on in a panel discussion between representatives from four regions with longstanding experience with public health partnerships between regional government and academic institutions, sharing examples, experiences and good advice.

Key messages:

- Despite representing different worlds, partnerships between regional governments and academic institutions are powerful and effective structures to address public health challenges.
- Sustainable partnerships should patiently be developed through building mutual understanding and trust between motivated individuals representing both academia and regional governments.

Joining two worlds - When academia meets real life and vice versa

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Partnerships between academic institutions and actors outside of academia have for some time been considered a universal remedy for solving complex issues in a wide range of fields; ranging from themes as different as commercial developments in innovation clusters to reducing social inequalities or working against climate change. Such partnerships are strongly encouraged by governing bodies, and are sometimes prerequisites for being eligible as applicants for funding schemes like H2020. A proof of the impact this model of cooperation has had, is the fact that partnership is the only organisational structure that has been elevated to be part of the UN17 goals for sustainable development.

Throughout history, academia has had a complex relationship with the society to which it belongs. On the one hand, academia depends on being seen as valuable, often through visible and concrete impact on society. On the other hand, within academia there is a strong norm of academic freedom stating that such freedom is best accommodated for through a certain degree of insulation between academia and society. This way of understanding academic freedom is an important cornerstone of the Humboltian university ideals as well as in the Mertonian CUDOS norms. Practice and policy actors may also find partnerships with academia complex to navigate. However, such partnerships can be valuable through ensuring that policies and developments are based on research findings and best practices. Furthermore, academics may educate and train practitioners, and evaluate and do research on their initiatives. However, partnerships can also be challenging for practitioners, as academics have to follow strict principles for research design and have little room for holding back results that may put the practitioners in a bad light. In this presentation the complex relationships between academia and practice are presented, both by examining advantages and by taking a critical stance.

Partnerships for public health between regional governments and academic institutions – status quo in European regions

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The development of partnerships is described as an important tool for achieving goals in the 2030 Agenda for Sustainable Development. Partnerships between regional governments and academic institutions could be important for solving public health issues, as they are often complex, and both academic and practice-related knowledge is necessary. Such partnerships at the regional level might be especially important as many sub-national regions in Europe have considerable responsibility and power in decision-making on important areas such as prevention, health promotion, and health care. The overall aim of this project was to provide more knowledge about public health partnerships between regional governments and academic institutions in different regions within WHO's Region for Health Network (RHN). Through a mixed methods research design, we wanted to identify and describe good examples of existing partnerships, and to investigate enabling factors, challenges, and lessons learned. Information on ongoing partnerships were collected by sending an electronical questionnaire to contact persons of the 43 members regions in the RHN. Based on the mapping, four regions were selected for group interviews with different stakeholders within regional universities and regional government. There were 31 regions (72%) who answered the questionnaire, and group interviews were carried out in Østfold (Norway), Varna (Bulgaria), Utrecht (the Netherlands), and Saskatchewan (Canada). In this presentation the results from the survey will be presented; describing the occurrence of partnerships, how public health partnerships are formalized and organized, important enablers, hindrances, how collaborations are carried out in practice, perceived benefits and successes, and experienced challenges.

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7.P. Workshop: Digital quality assurance of equitable public health interventions: why, how and examples

Organised by: Region Västra Götaland
Chair persons: Per-Olof Östergren - Sweden, Maria Magnusson - Sweden
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Objectives are to highlight knowledge and experiences of follow-up and evaluation of public health interventions with a focus on health equity. A digital instrument for planning, documentation and quality assurance, used in several Swedish settings, will be presented.

Health inequity emerges from structural issues. Public health interventions generally widen the health gap which is maintained and enforced by mechanisms on many levels in the societies. Interventions that aim to counteract health inequity need to take this into account and broaden the perspective to include not only life style habits but also discrimination, stigmatization, control, influence and power. Critical reflection is necessary to prevent interventions from consolidating current positions of power and to assure that communities and individuals - can influence goal-setting and measures taken. The Swedish Commission for Equity in Health highlighted the importance of methodological development and knowledge-based efforts including better follow-up, evaluation, research and dialogue. Mediators between measures taken and effects need to be clarified.

Health promotion needs to be evaluated systematically with a focus on how interventions function in relation to the task of closing the gap. However, interventions are often merged into other activities and the impact of a continuously changing society cannot be controlled for. Use of evidence-based methods including influence from participants are fundamental, as is critical reflection. Documented by a digital instrument, measures taken and reflected upon can form a database for continuous summative and formative evaluation, aiming at developing methods for effective public health work.

Added value

Presenting and discussing a digital instrument for planning, documentation and quality assurance will increase the potential for public health efforts to close the health gap. We use it for formative and summative evaluation. For 2018, 222 activity reports were launched and discussed by team members, leading to professional development. Issues for future development included the importance of giving time for shared values to consolidate and trust to emerge. Quantitive goals were reached.

Coherence

Presentation 1 will clarify why control, power and influence must be taken into consideration in interventions that aim at counteracting health inequity.

Presentation 2 will describe the instrument and how it draws on theories of health and critical reflection.

Presentation 3 will tell the story of an example from a Swedish dental public health care setting where the instrument has been used and point at strengths and areas for development.

Format

Presentation 15 minutes each. Followed by short discussions (5 minutes) in the audience who will then be asked to present short inputs on post-it notes that will be collected by the organizers. During the last 30 minutes there will be a general discussion using the post-it notes as starting point.

Key messages:

- A digital instrument for planning, documentation and quality assurance, with focus on health equity, will increase the positive impact of public health efforts.
- Public health interventions that use the instrument will be better equipped to increase health equity.

Ground pillars of a method for quality assurance of public health work

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Socioeconomic position, expressed in terms like educational level, income, wealth or origin, is a strong predictor of most health outcomes. Sustainable efforts for good and equitable health need to draw on theories that consider power relations as well as scientific methods for health promotion, prevention and /or treatment. Systematic planning and documentation is required. The perspective should include not only life style habits but also issues like discrimination and stigmatization. Control and influence from participants are necessary to assure that goal-setting and measures taken are adequate.

Health inequity emerges from structural issues and is mediated by mechanisms on different levels, mechanisms of which some are difficult to describe and analyze. Regrettably, health care systems, including public health interventions, in many cases reinforce this inequity. Health care staff's personal perspectives and prerequisites (e.g regarding education and income) often differ from the corresponding ones in groups with the less favorable health outcomes. That is one reason why efforts for equitable health need to involve perspectives, prerequisites and health motives of ‘‘targeted’’ individuals and groups as salient parts of interventions, from the planning stage and throughout. A complementary way to prevent intervention procedures from consolidating current positions of power is to allow for professionals to continuously perform critical reflection of their own presuppositions and prejudices in relation to actions and results.

The use of determinants from Social Cognitive Theory (SCT) (self- efficacy, observational learning, facilitating, expectations of outcome, reciprocal determination) enables planning that consider not only individuals and groups but also their social context. Systematic use of strategies from SCT, critical reflection and formative as well as summative evaluations allow for quality assurance and knowledge development.

Health Equilibrium Methodology (HEM), a digital tool in public health work for health equity

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HEM draws on theories for health behavior and power relations. The methodology contains a structured documentation for formative and summative purposes. Strive for a high level of participation, control and influence from individuals and community members is a foundation pillar. Systematic use of theories allows for answering the fundamental question ‘‘in what way do we anticipate the planned intervention to contribute to closing the health gap?’’ Social Cognitive Theory (SCT) considers social and physical environment. HEM currently involve several SCT determinants in planning and evaluation; self- efficacy, observational learning, facilitating, expectations of outcome, reciprocal determination. The qualitative procedure is described below. Numeric data are also collected.

Step one (before action, e.g. a dialogue-meeting): Consider which determinant(s) may be affected by the planned action, and by what mechanisms.

Step two: Carry out the action.

Step three: Describe what happened, based on input from the participants and the anticipated determinants and mechanisms.

Step four: Systematic self-critical review based on common grounds for discrimination. Examples: Was it difficult to engage or include participants because of language, gender, function variation, national background or other factor? In retrospect, can you identify stereotypes in the examples you used? Did anybody else at the event act to maintain prejudice or exclusion?

Step five: consider implications for methodological development.

Step six: Formative collective evaluation based on reflections from step four and implications from step five.

Stakeholders using HEM gather regularly for workshops based on their HEM-reports, aiming at developing tools for increasing health equity. HEM is implemented in public health work of Angered Hospital and the Dental Public Health, Region Västra Götaland, and is used by 20 different stakeholders. A web-application has been developed to facilitate documentation and spread.

Implementing HEM in the assessment of oral health promotion to families in underserved areas

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The aim was to, in an oral health promoting setting in low socioeconomic areas, implement a method aiming at improving quality of work by assessing both formative and summative results. The overall aim is to decrease health inequity.

Methods:

Five teams of dental hygienists (n = 5) and dental nurses (n = 3), who operated in socioeconomic low-status areas, participated. The teams were performing health promoting activities on arenas as for example family-centrals. These teams were introduced on how to report health promoting activities according to the Health Equilibrium Methodology (HEM), which is based on Social Cognitive Theory. Following questions were put and answered in every report: Which health determinants were targeted? Did any person seem to perceive him-/herself excluded? Did anything unexpected happen? What to think about next time? Quantitative data were also documented: Almost six-hundred individuals were included in a total of 36 reports. Of these 50% were adults/parents and the rest children, most of them between 1-6 years old. The reports were written directly into a database after every activity and then processed by a facilitator and later discussed with the teams in workshops every third month.

Results:

Analysis of the reports shows that the implementation of health promoting activities according to HEM included the following: -Identification of important health determinants. -Attention on how to get everyone involved and if anything unexpected happened. - Suggestions for change for the next time. Throughout the workshops the team-members exchanged experiences.

Conclusions:

The HEM-method facilitates depicting and discussing the process of health promotion with focus on health equity. Thereby the method has a potential to support development of high-quality health-promoting activities in populations with low socioeconomic status. It may also lead to a better professional self-confidence.

7.Q. Workshop: Care4Care: the migrant care workforce in Europe

Organised by: EUPHA (HWR), EUPHA (HSR), EUPHA (PHPP)
Chair persons: Ellen Kuhlmann - EUPHA (HWR), Judith de Jong - EUPHA (HSR)
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Background:

Foreign trained health workers increasingly fill the care gaps caused by labour market shortage and governance failures. As doctors, nurses and carers they make a crucial contribution to health system performance and the health of the population. These contributions are likely to increase in future, especially in high-income countries, where demographic change and NCDs reinforce the gap between demand for care and labour market supply. However, health system demands for migrant carers do not sit easily with the new wave of nationalism and populist movements in Europe and globally; they may also reinforce the ‘care drain’ in less well-resourced sending countries. There is an urgent need for more inclusive health workforce governance in order to take ‘care’ for the migrant health workforce both nationally and globally and ensure ‘health for all’.

Objectives:

This workshop addresses these questions and fosters critical debate. It has three major aims: to make the migrant carers visible as important part of the health workforce and health system performance, to unmask the threats of growing nationalism and populist movements to healthcare systems and universal healthcare coverage, and finally to critically discuss how to govern the migrant care workforce in ways that improve both integration in the host country and solidarity across Europe and globally. The workshop brings together knowledge and expertise from the areas of health workforce, health services, and health policies and systems. It is organised as round table discussion, facilitated by an overview of migrant care workforce patterns and policies in selected European Union (EU) high-income countries and two in-depth country cases, namely Italy and Austria, both known for growing populism and nationalism and strong anti-migrant policies in the EU. The three panelists will discuss the role of migrant care workers and explore, from different perspectives, how to build capacity for new forms of health workforce governance that move beyond narrowly defined national/regional interests of health systems. The workshop will foster a wider debate on migrant careers and health workforce needs, and how public health can contribute to better take 'care' for the human resources for health.

Key messages:

- Migrant carers form an important part of the health workforce in European countries.
- Health systems must take care of the migrant health workforce and counteract growing nationalism.

The migrant health workforce in European countries: does anybody care?

Ellen Kuhlmann

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Background:

Data and knowledge on the migrant health workforce are poorly developed, and we do not understand which institutional contexts may foster responsible governance. This introduction seeks to set the scene for critical debate by placing the structure and composition of the migrant health workforce in the context of health systems and policy. The aim is to confront growing nationalism and populism with the important contribution of migrant carers to health system performance and the health of the population.

Methods:

A comparative approach was applied and a rapid review of available data and research undertaken. Five EU countries were selected which represent different healthcare systems, health workforce patterns and political contexts in high-income countries, comprising Austria, Denmark, Germany, Italy, UK.

Results:

The migrant workforce pattern show high variation. The number of physicians is highest (around 28%) in the UK, and low in Austria, Denmark and Italy (below 5%) while Germany is in a middle position (around 10%). The picture turns when looking at nurses and carers, where Italy and Germany for instance are placed in higher ranks. The results suggest three things: no coherent patterns of health system types and composition of the migrant care workforce can be identified. There is also no clear connection between the size of the migrant health workforce and the relevance of populist movements. And finally, the migrant carers remain largely absent in the policy debates; none of the health systems has develop a comprehensive governance model that 'cares' for the migrant carers and that could help to highlight their contribution against the threats of growing nationalism and populism.

Conclusions:

There is a need for comprehensive European monitoring and research to develop more inclusive health workforce governance and to identify institutional conditions that improve capacity and capability for 'care' 'of the migrant health workforce.

Italy: nationalist anti-migrant policies and emigration of Italian health professions

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Background:

Traditionally Italy has been characterised by a limited investment in healthcare personnel, apart from physicians. The outcome has been a low health worker to population density; especially nurses and long-term care personnel face shortages. The outcome has been, at least until 2010 an increasing presence of migrant care workers. However, the situation has changed for several reasons. On one hand, since austerity policies have been implemented, the whole healthcare system has registered a freeze in new healthcare personnel hiring. One the other hand, in more recent years policies have started to be implemented, especially by the latest government (where one of the two governing parties is a radical right one) to make it more difficult for migrants to access the country.

Methods:

The study draws on an analysis of administrative data and previous researches in the field, matched by qualitative interviews with key informants at the national level.

Results:

Shortage of skilled workers in the health sector is likely to increase in future. It is becoming more difficult for foreigners to get access to work in this sector, while Italian healthcare workers are leaving the country. In recent years there has been a strong increase in healthcare professionals' emigration toward North America and other EU countries.

Conclusions:

Italy needs both a new effective strategy of health workforce governance and a more migrant-friendly policy to manage incoming and outgoing flows of health professionals.

Austria: target country for care workers despite increased anti-migration policies

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Background:

Austria is facing workforce shortages in long-term care making the country an important destination for migrant care workers, particularly from Eastern European countries. Many of them are working in low-status positions as carers in 24-hours care, although they are often qualified professionals. These 24-hour care positions are often in private households with no regulated workplace safety or standard minimum salaries. Despite this steady flow of migrant carers, shortage of nurses and carers in the country persists and is likely to increase.

Methods:

A rapid review of available data and research was undertaken.

Results:

The migration of nurses to Austria has played a significant role for many years, as the training of certified nurses within the country has only risen marginally. The annual inflow of foreign trained nurses reached a high in 2016 as did the number of 24-hour care workers, most of which are women. The recent cuts by the government towards family allowances for children not living in Austria will hit this population hard. Current anti-migration policies thus take the risk of reducing the numbers of migrant carers, although the government does not have a plan in place on how to fill the gaps and develop more effective health workforce planning and management.

Conclusions:

Growing nationalism, a government pushing towards stricter migration laws and a restrictionist policy stance of unions relative to migrants, all create new threats to a health system heavily dependent on migrant carers.

Panel: Care4Care: what is it about the migrant care workforce and how to improve inclusion?

Gabrielle Jacob

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A round table comprising three panelists will discuss the topic from different perspectives.

- Gabrielle Jacob, WHO: The WHO Global Code of Practice on the International Recruitment of Health Personnel. How far have we come, where are we now and what's next?
- Natasha Azzopardi-Muscat, EUPHA President: The role of public health in raising awareness on the contribution of migrant workers to health systems
- Scott L Greer, European Observatory on Health Systems and Policies: Governance4Care of the migrant care workforce: what matters?

8.A. Women's health

''People expect you to work like you don't have a child but be a mum like you don't have a job'

Lynne Rush

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Background:

Recent UK campaigns that aim to increase awareness of sepsis have been accompanied by high profile media reporting about deaths in children resulting from misdiagnosis. Parents have been urged by the Sepsis Trust to have a low threshold for suspecting sepsis when their child is unwell and to follow 'gut instincts', challenging health professionals if necessary. This study aims to explore how parents enact this advice in the context of everyday life.

Methods:

Thematic analysis of 16 focus groups comprised of parents and carers of pre-school children and 4 groups with individuals affected by sepsis.

Findings:

Participants encountered various barriers and conflicts of interest when endeavouring to do the 'right' thing in managing acute childhood illness. Gaining access to healthcare was often challenging, with parents weighing up the need for reassurance against fears of over using scarce health care resources. Despite knowledge of recent sepsis awareness campaigns, parents frequently reported that the diverse symptoms described were too non-specific to be of practical use. 'Knowing your child' and being able to detect subtle deviations from normal was seen as key to decision-making about the need to escalate care. However, for parents in paid employment, the obligation to be present with their sick child to monitor symptoms closely was often in conflict with their duty to employers. The capacity to work flexibly, while highly valued, was inconsistent and frequently based on discretion of line managers rather than supported by official workplace policies.

Conclusions:

Recent awareness campaigns have highlighted the need for parents to be alert to the possibility of sepsis when their child is acutely unwell. However current campaign materials do not enable parents to confidently identify when to seek help. Lack of access to primary care appointments and unsupportive employment policies may act as barriers to acting in accordance with sepsis awareness messages.

Key messages:

- Recent sepsis awareness campaigns focus on the importance of 'parental instinct' in managing risk.
- Parents often experience conflicting obligations towards their child and employer which can act as a barrier when monitoring risk during episodes of acute illness.

Risk factors associated with repeated voluntary termination of pregnancy in Tuscany, Italy

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Introduction:

In Italy, voluntary termination of pregnancy (VTP) was introduced in 1978 with law n°194, it guarantees autonomy of choice and avoids the practice of unsafe abortions, health complications and death. The aim of this work was to analyse variables associated with repeated VTP.

Methods:

A cross-sectional study was realized, with data relative to VTP acquired in the period 2016-2018 in Tuscany South-East area (Italy). Data on age, nationality, civil state, education level and n° of living children were extracted from the information system in April 2019. A descriptive analysis was conducted using Stata.

Results:

The sample consisted of 3451 females (65% Italian). The average age was 31.1±7.3 years. The majority of females (53%) had medium-high education level (non-Italian females had more frequently low education level: 48% vs. 28%, chi-2; $p<0.001$). The 57% were unmarried, mostly Italian (64% vs. 43%). The majority (62%) already had child (26% one, 36% two or more). Females with repeated VTP represented 25% and were significantly older (32.1 ±6.4 vs. 30.7±7.6; $p<0.001$). The non-Italian females (OR = 2.15; 95%CI 1.8-2.6; $p<0.001$) and females that already have children (OR = 2.4; 95%CI 2.02-2.9; $p<0.001$) had higher probability of having a VTP in the past. The multivariate analysis showed lower probability of repeated VTP for married women (OR = 0.49; 95%CI 0.42-0.64) and women with higher education level in confrontation to those with an elementary education (OR = 0.3; 95%CI 0.18-0.62). The variables associated with higher probability of VTP were age (OR = 1.02; 95%CI 1.01-1.04), nationality (OR = 2.0; 95%CI 1.7-2.4) and children (OR = 2.4; 95%CI 1.9-3).

Conclusions:

Females with repeated VTP were older, have already children and were more frequently of non-Italian nationality. The reduction of VTP should be one of major objectives of public health as in has negative consequences on women's health. The targeted public health intervention could be a solution of this situation.

Key messages:

- Females with multiple VTP were older, already had children and were more frequently of non-Italian nationality.
- Targeted public health interventions could be effective in reducing the number of VTP.

Nation-wide profile of women using hormonal contraception in Finland in 2017

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Background:

Up to 69% of European women use contraception. Nordic countries have traditionally high levels of contraception use, of welfare and social equality. However, the uneven population distribution across the Finnish territory makes the easiness of access to health care structures and trained professionals an important issue in relation to effective contraception use. Understanding the patterns of contraception prescription and their underlying determinants is crucial to guarantee the best contraceptive option for each woman.

Methods:

In Finland, users of hormonal contraception (HC) can be identified from register records only starting from 2017. This nationwide, register-based study includes all women with at least one HC prescription in 2017, and a reference cohort of non-users, matched by age and municipality. Through linkages to Finnish National Registers we retrieved sociodemographic data. We calculated national and regional rates and distributions, and compared distributions with t-test, Kruskal Wallis or Chi-squared test.

Results:

The HC cohort included 294445 women aged 15-49 years (mean 28.9, SD 8.6), 25.8% of Finnish women of that age range. The majority of them were unmarried (71.8%) and employed (71.6%). Compared to non-users, HC users were more often unmarried, a cohabiting couple without common children, employed, had upper secondary or bachelor level education, and higher annual income ($p < 0.001$). Differences between HC users and non-users were non-homogenous across 70 Finnish regions.

Conclusions:

These preliminary results show different sociodemographic correlates of HC use across Finnish regions. Our findings will guide public health strategies aimed at guaranteeing the best contraceptive option for each woman across the whole country.

Key messages:

- Sociodemographic correlates of HC use differ across Finnish regions.
- These differences may reflect differences in access to health care services, in prescribers' characteristics and in HC methods.

Reproductive and contraceptive healthcare for vulnerable people in the Netherlands: Pregnant not now!

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Issue/problem:

Unplanned and unwanted pregnancies are an important issue in public health. Especially when parents already are in complex or vulnerable situations, for example being homeless, having an addiction, serious psychiatric- or financial problems or intellectual disabilities. Although most of these parents are in contact with several professionals, family planning and contraceptives are rarely discussed.

Description of the problem:

In 2014 a pilot programme was developed to support vulnerable adults on family planning and adequate use of contraception. In a qualitative explorative case study the pilot was evaluated.

Results:

The pilot showed a significant increase in postponed pregnancies by using appropriate contraceptives. Over eighty percent of this population started contraception on a voluntary basis. The study showed 5 determinants influencing contraception use: responsibility, knowledge, finance, emotion and social environment. If needed, the programme played a role on all different determinants. The method of working was the key element in the success: addressing family planning and contraceptive use through an outreach practise orientated presence approach and empowerment. Another important factor for success was the collaboration between public health and medical doctors.

Lessons:

The successful pilot became regular care for vulnerable (potential) parents in Tilburg. The pilot was replicated in two other cities, Rotterdam and Nijmegen, with similar results. In 2018-2021 the programme will be implemented nationwide with financial support of the Ministry of Health, Welfare and Sports, coordinated by GGD GHOR Nederland (the Association of GGDs (Regional Public Health Services) and GHOR-(Regional Medical Emergency Preparedness and Planning) offices in the Netherlands).

Key messages:

- 'Pregnant not now!' successfully supports vulnerable people with family planning and contraceptives, helping them to gain control over their future and preventing unplanned and unwanted pregnancies.
- The programme is unique and preventive, its innovative character is applicable in other communities in the Netherlands and possibly across Europe.

Health situation and health care of women aged 50 years and older in rural regions in Germany

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Background:

In many countries demographic changes and regional differences lead to inequalities in healthcare provision. In Germany, this applies especially to rural regions and could affect the healthcare situation of middle-aged and older women in particular. Our study, which is part of the project "Frauen 5.0", explores the health and healthcare situation of women 50 years and older in Northeastern Germany, with focus on outpatient gynaecological and general medical care and reasons for healthcare utilisation.

Methods:

Our analyses comprise the health situation of women aged 50 years and older, their utilisation of outpatient gynaecologists and general practitioners (GPs), reasons for utilisation, access barriers to outpatient care, the demographic situation and the spatial distribution of gynaecological and GP practices in Northeastern Germany. We use a variety of data sources; main data source is the German Health Interview and Examination

Survey for Adults (DEGS1, 2008-2011), which was carried out by the Robert Koch Institute and is representative of the German adult population.

Results:

There is an unequal distribution of gynaecologic and GP practices in Northeastern Germany, with the highest density in and around Berlin. About 30% of gynaecologists and GPs in the study region are aged 60 years and older. Whereas in all age groups at least 80% of women used GP services in the last 12 months, the use of gynaecologic services declines from 80% in 18- to 29 year-old to 45% in 70- to 79 year-old women. Most important reasons for seeking gynaecological treatment are menopause and early detection of cancer.

Conclusions:

The analyses show that there is need to ensure adequate health care for women aged 50 and over in rural regions in Germany. Based on the results, within the project ''Frauen 5.0'' innovative solutions for this task, e.g. interprofessional cooperation, will be identified.

Key messages:

- Analyses of outpatient healthcare services show an unequal distribution of gynaecologic and GP practices in Northeastern Germany; about 30% of the gynaecologists and GPs are aged 60 years and older.
- Whereas in all age groups at least 80% of women used GP services in the last 12 months, the use of gynaecologic services declines from 80% in 18- to 29 year-old to 45% in 70- to 79 year-old women.

Health service provision for women 50+: the ''Frauen 5.0'' project in the north-east region in Germany

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Background:

A higher life expectancy for women in Germany coincides with shortages in health professionals. Besides gynecologists (Gyn), the main providers of ambulatory healthcare services for women 50+ are general practitioners (GPs), which are not providing any gynecological services. The project ''Frauen 5.0'' aims to identify strategies for improving health care provision for women 50+ in three north-east states of Germany by analyzing health system indicators and exploring the perspective of service providers, users, practitioners and policy makers.

Methods:

Mixed-methods combined with participatory research including 1) secondary data analysis (Robert Koch-Institute and Zentralinstitut); 2) postal quantitative survey of all Gyn (n = 1.031) and of a randomized sample of 66% of GPs (n = 3.514); 3) qualitative interviews of women 50 + (n = 25); and 4) round tables with practitioners and policy makers.

Results:

In Germany 25% of the population are women 50+, from which 41% do not use Gyn services. Users expressed the need that GPs/Gyn actively address women's health issues during consultation. The survey (response rate 51% Gyn; 25% GPs) revealed a high willingness to collaborate among GPs and Gyn. Barriers and synergies in organizational, professional and user aspects were identified. Task-sharing between GP and Gyn, delegation to non-medical personnel and the introduction of financial incentives showed to be a key element to improve health care services for women 50+.

Dissusion:

In the SDG era of ''leaving no one behind'' acknowledging and addressing the unmet needs of women 50+ is from a public health perspective an issue of utmost urgency as is closing the gap between research, policy and practice.

Conclusions:

New strategies to improve health care services for women 50+ were developed by integrating the evidence from actual data in meaningfull dialogues between research, policy and practice.

Key messages:

- New models of health care provision are required to adress and improve the health of women 50+.
- Closer collaboration between research policy and practice can be achieved by participatory methods.

Mothers' Oral Health Literacy and children's oral health: study in the department of Pikine, Senegal

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Background:

Several studies have shown that social conditions in which children are raised and family psychosocial factors affect their oral health. Oral health literacy (OHL) has been shown to be associated with prevalence of dental caries, access to care and prevention of oral diseases. No studies have addressed this issue in Senegal.

Objective: To study the characteristics of the mothers' OHL and its association with children's dental health.

Methods:

Cross- sectional study in the district of Pikine, a suburb of Dakar including 16 municipalities. Two-stage cluster sampling and a sample comprising 315 children from 3 to 9 years old and their mothers. Data on oral health status were collected from clinical examinations, sociodemographic and OHL (Sistani et al' OHL-AQ) data were collected during face-to-face interview.

Results:

More than half of the mothers (56.5%) had a low OHL, but 68.9% had an adequate score for the communication/interactive dimension. The level of OHL increased significantly with education level, household wealth and dynamism of the social support. Prevalence of dental caries was 64.8%, following a social gradient and significantly associated with the mothers' OHL level (OR = 5.2) CI[2.2-14.1]. The oral health behaviour of families was significantly associated with the level of OHL and children's dental health. A structural equation model showed the OHL was a mediating factor between social characteristics and oral health behaviours.

Conclusions:

The OHL of mothers is an important variable to be included in the study of social inequalities in oral health. The communication/interactive dimension seems to be decisive in the African context of an oral culture and dynamic social support which makes it possible to provide better knowledge and preventive behaviour.

Key messages:

- High maternal OHL should be reinforced to lessen oral health inequalities among Senegalese children.
- The communication/interactive dimension seems to be decisive in the African context of an oral culture and dynamic social to enhance OHL.

8.B. Welcoming refugees: from monitoring to practice

Surveillance of health and primary care of asylum seekers in reception centers: concept and results

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Background:

Reliable data on health and primary care among asylum seekers in reception centers are essential for the planning and provision of medical services, but haphazard care provision and lack of standards for health information systems in these centers preclude routine health monitoring. We aimed to establish a routine surveillance system in reception centers for asylum seekers in Germany, generating multi-center data on key health indicators.

Methods:

To enable routine health surveillance, we established an electronic medical records system (RefCare©), a research network, and an IT-infrastructure for the automated analysis of health data in German reception centers. Within the network, 64 health and health care indicators on morbidity, care processes, quality of care and syndromic surveillance were identified. In November 2018, we analyzed 33 indicators using routine health data from nine centers in three federal states. We calculated single-center prevalence and pooled estimates for selected morbidity indicators stratified by age and sex, and process and quality indicators stratified by center.

Results:

A total of 8,406 patients and 39,449 patient contacts were analyzed, with mean utilization of health services ranging from 2.33 (Standard deviation, SD: 2.0) to 11.49 (SD: 22.82). The morbidities with the highest prevalence were respiratory, digestive and certain infectious diseases, followed by consequences of external causes, musculoskeletal and mental health conditions. Irrational use of antibiotics was below the threshold for primary care settings.

Conclusions:

For the first time in Germany, a harmonized infrastructure for the automated, anonymized surveillance of the health and health care of asylum seekers in reception centers was established in several federal states. The analysis of morbidity indicators shows a primary care-typical disease profile, with special needs regarding mental health and consequences of external causes, such as physical trauma.

Key messages:

- Routine health surveillance of asylum seekers in reception centers can be achieved through an innovative harmonized, cross-regional, multi-center, anonymous and automated surveillance system.
- Health issues of asylum seekers in reception centers in Germany mainly consist of primary care conditions with special vulnerabilities regarding mental health and consequences of external causes.

The health of asylum seekers in Finland: a total population health examination survey (TERTTU)

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Background:

There is scarcity of representative population-based data on the health and wellbeing of asylum seekers in Europe. The Asylum Seekers Health and Wellbeing Survey (TERTTU) was launched to provide the evidence-base for developing services for asylum seekers as well as for planning and allocation of healthcare resources at a national level.

Methods:

A sample of all first-time asylum applicants between 19.2-30.11.2018 was drawn from the Finnish Immigration Services electronic asylum database. Altogether 784 adults aged 18 years and older took part in the standardised health examination and face-to-face interview with participation rate of 79%. Interviewed health measures included the Minimum European Health Module, conditions previously diagnosed by a physician, permanent injury due to violence or accident and somatization.

Results:

Self-rated health was good among 66% (95% CI 62,5-69,1) and 42% (95% CI 38,5-45,4) reported having some self-reported long-term illness or health problem. The most common previously diagnosed conditions were diseases of the circulatory system (19%, 95% CI 16,5-22,0), musculoskeletal system (18%, 95% CI 15,6-21,1), mental and behavioural disorders (13%, 95% CI 10,9-15,6) and diseases of the respiratory system (10%, 95% CI 8,0-12,2). Nearly half (47%, 95% CI 43,7-50,8) reported having a permanent injury due to violence or accident. Somatisation was common: 23% (95% CI 20,3-26,2) reported having headache, 23% (95% CI 19,9-25,8) back ache and 13% (95% CI 10,8-15,6) other pains at least several times a week.

Conclusions:

The overall health of newly-arrived asylum seekers was poorer compared with the general Finnish population and migrant origin populations from similar countries of origin permanently living in Finland. Significant differences in asylum seekers health were found by sex and region of origin. Survey data will be used for developing the national initial health assessment protocol for asylum seekers during 2019.

Key messages:

- The TERTTU Survey is the largest population-based health examination survey among newly-arrived asylum seekers in Europe to date.
- The extensive data gathered over the course of the survey will be used for developing services for asylum seekers at a national level and is of high relevance also to other European countries.

Health monitoring among refugees: a state-wide, cross-sectional, population-based study in Germany

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Background:

Health monitoring in Germany falls short on generating timely, reliable and representative data among migrants, especially transient groups such as asylum seekers and refugees (ASR). We aim to advance health monitoring approaches and obtain reliable estimates on health status and access to health services among ASR in Germany's 3rd largest federal state.

Methods:
We conducted a state-wide, cross-sectional, population-based health monitoring survey in nine languages among ASR in collective accommodation centres. Questionnaire items capturing health status, access to care and sociodemographic variables were taken from established surveys and translated using a team approach. Random sampling on the level of 1,938 accommodation centres was employed to draw a balanced sample. Multilingual field teams recruited eligible participants using a "door-to-door" approach.

Results:
Fieldwork was conducted in 58 centres, obtaining a response rate of 42.2% (n = 412). Age, sex and nationality of the included sample were comparable to the population of asylum applicants in Germany. Adults reported longstanding limitations (16%), bad/very bad general health (19%), pain (25%), chronic illness (40%), and depressive (46%) and anxiety symptoms (45%). 52% utilised primary and 37% specialist care services in the previous 12 months, while reporting unmet needs for primary (31%) and specialist care (32%). Younger and male participants had above-average health status and below-average utilisation, in contrast to older and female ASR.

Conclusions:
Our health monitoring survey yielded reliable estimates on health status and health care access among ASR, revealing relevant morbidities and patterns of care. Applying rigorous epidemiological methods in linguistically diverse, transient and marginalized populations is challenging, but feasible. Integration of this approach into state- and nation-wide health monitoring strategies is needed to sustain this approach as a health planning tool.

Key messages:
- Applying rigorous epidemiological methods in linguistically diverse, transient and marginalized populations is challenging, but feasible.
- Sustainable integration of multi-lingual epidemiological methods is required in state- and nation-wide health monitoring to capture health status and access to health services for ASR.

Treatment gap and mental health service use among Syrian refugees in Turkey

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Introduction:
Turkey hosts the highest number of Syrian refugees in Europe. Refugees are often vulnerable to situational forms of psychosocial distress as a consequence of exposure to war and violence which may result in more profound mental health problems if no treatment is sought. The aim of this study is to report evidence on mental health and psychosocial support (MHPSS) needs, access and barriers to MHPSS care among Syrians refugees living in Istanbul, Turkey.

Methods:
A cross-sectional survey was conducted among Syrian refugees aged 18 years or over in Istanbul (Sultanbeyli) between February and May 2018. Data among 1'678 Syrian refugees were collected on mental health outcomes using the Posttraumatic Stress Disorder (PTSD) Checklist (PCL-5) and the Hopkins Symptoms Checklist (HSCL-25) for depression and anxiety. We also collected data on health care utilization, barriers to seeking and continuing care as well as knowledge and attitudes towards mental health. Descriptive analyses were used.

Results:
The prevalence of PTSD, depression and anxiety was 19.6%, 34.7% and 36.1% respectively. The treatment gap was 89% for PTSD, 90% for anxiety and 88% for depression. 249 respondents (15%) screened positive for either PTSD, depression or anxiety in our survey and self-reported emotional/behavioural problems since arriving in Sultanbeyli. Several structural and attitudinal barriers for not seeking care were reported.

Conclusions:
To overcome the treatment gap, mental health care programmes need to be more responsive to the needs of Syrian refugees. Barriers to seeking and continuing care can be overcome by providing MHPSS services in the community which facilitate access to care. Community-based programmes of care should be supported by activities which increase awareness about mental health issues and tackle negative attitudes towards mental illness.

Key messages:
- This study provides the first nationally representative data on the mental health of Syrian refugees in Turkey, and shows that refugees have high mental health needs.
- Syrian refugees do not seek mental health care despite availability of mental health services in the community.

Participatory practice with queer refugees in Germany

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Evidence shows that queer refugees in Germany neither have equal access to the health system, information, HIV-Testing and treatment, nor are they involved in HIV-Prevention. The community-based participatory health approach provides a valuable tool for building capacity and enabling queer refugees to create knowledge and develop appropriate prevention tools for their communities.

"Your health, your rights" (2017-2018) is a 2-year community-based participatory health project, which aims to improve the involvement of queer refugees in HIV-Prevention, as well as to create appropriate prevention media in collaborative way. It is conducted by the National AIDS Organization in collaboration with partners from different immigrant organisations, queer refugees and AIDS service organisations - all based in Berlin.

The components of the project include a multilingual participatory need assessment workshop, a series of capacity-building methodological workshops, a community-led art-based project and a participatory evaluation.

12 queer refuges choose to take part in the project and have been supported to document their lived experiences using community and concept mapping. Key topics and needs connected to sexual health have been jointly identified. Based on these results and in the framework of an art-based workshop participants created a design of multilingual website for queer refugees which delivers helpful information in appropriate way (www.queerrefugeeswelcome.de).

The involvement of queer refugees in HIV-Prevention is possible, if it is enabled. The usage of participatory visual methods has opened up ways of participation of even highly traumatised refugees who otherwise are not able to verbally express their thoughts and enabled the communication between participants who don't share the same language.

Key messages:
- The resources of queer refugees are identified and mobilised and community building processes are supported. The participants improved their competencies (empowerment).
- Service providers are able to tailor their services better to the needs of queer refugees.

8.C. Digital technologies: future in care

Establishment of Centre of competence ''Leonardo Da Vinci'' in Medical University of Pleven, Bulgaria

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Issue/problem:

In 2016 Ministry of education and science initiated a call for projects for establishment of centres of competence aiming to increase the level and market orientation of the research activities in Bulgaria and to support the development of innovation capacity. The center of competence on personalised medicine, 3D and telemedicine, robotic and minimally invasive surgery in Medical University of Pleven is to be developed from 2018 to 2023.

Description of the problem:

The objectives are: 1) To create a high-tech research and educational product with long-lasting tendencies to improve the community's scientific development and level of public health; 2) To set up research teams of young researchers to write modern PhD theses and publications in high impact scientific journals; 3) Ð¢Ð¾ integrate research results into the business.

Methods:

classical and virtual microscopy, computer-assisted morphometry, clinical-genealogical method, functional endoscopic sinus surgery, laparoscopic transanal total mesorectal excision, hysteroscopic morcellation and others.

Results:

About 2500 patients will be treated in the centre for 5 years. Diagnostic panels will be developed for different cancer types and the most common hereditary diseases within Bulgarian population. Individual orthotics suitable for 3D printing will be developed and patented. Tissue transplants will be created for body models that will be used for training on robotic surgical simulator. The telemedicine center will allow distant consultations with other centers, specialized training and research in virtual reality. The teams are experienced in the genetic testing and robotic surgery. Till 2015 all robotic surgeries in Bulgaria were performed in Pleven. The proportion for 2016, 2017 and 2018 was respectively 81.1%, 71.5% and 32% due to the increase of number of robotic surgery centres. Pleven's centre has strong training traditions to guarantee the high quality of planned 72 workshops and seminars.

Key messages:

- The introduction of new technologies requires new models of training of health professionals to develop the necessary skills to take full advantage of their benefits.
- Better dissemination of innovations increases the access of population to health care of good quality and the achievement of highest attainable standard of physical health.

Final Products: a regional integrated output assessment in Public Health services, 2017-19 Italy

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Issue/problem:

The classification of Public Health services (PHS) and related healthcare information systems (HIS) in Friuli Venezia Giulia, Italy, are complex and non-homogeneous. Since 2017 the Region has been realigning HIS according to the new Final Products (FP) System to classify PHS. The aim is to implement an integrated FP-based HIS, easing data transmission and improving the quality of planning, scheduling and expense reporting activities.

Description of the problem:

From June 2017 to October 2018 68 Public Health professionals (PHP) from 10 Public Health areas outlined 102 PF from HIS through flowcharts and technical dossiers. Afterwards (10/5th-10/29th 2018) they assessed HIS through a questionnaire of 24 items. Statistical analysis was performed with Fisher's Exact Test, stratifying 4 categories (physician, veterinarian, prevention technician, other professional). In June-July 2019, through a matrix-based assessment, PHP of regional PHS were invited to weight each FP activity on the basis of involved personnel and possible required transfer (valorisation phase).

Results:

The questionnaire got 45/68 responses (66%). Among responders, 27% reported a HIS for their PHS not being available at all; 65% of responders agreed on the usefulness of an integrated regional HIS for PHS. Fisher's Test showed significant differences in HIS features according to profession, as interoperability with national/regional databases ($p = 0.0144$), mobile usability for external activities ($p = 0.0302$), real correspondence between monitored data and performed activities ($p = 0.0215$). Valorisation was performed by 445/557 PHP (80%).

Lessons:

PHS currently often deal with functional flaws or inappropriateness of HIS when compared to real activities. Valorisation data will be submitted to the attention of policymakers in October 2019 in order to apply an integrated classification of PHS considering both effectiveness and generation of value of activities performed in Public Health.

Key messages:

- Healthcare is a multilayered product and measuring healthcare outputs requires managerial skills and tools, to assess need of resources and to plan activities.
- The regional Final Products project defines a uniform classification of Public Health services and implements a standardised accounting system for activities performed in Public Health.

European network staff eXchange for integrAting precision health in the health Care sysTems'' project

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Background:

Precision health aims to prevent and predict illness, maintaining health and quality of life for as long as possible, by drawing on the new technological and data science tools to translate volumes of research and clinical data into information that citizens, patients and doctors can use.

Objective:

The ExACT consortium, funded by the Marie Curie Research and Innovation Staff Exchange (RISE) 2017 - Horizon 2020, is aimed at building a community of academic and non-academic institutions that generates high quality, multi-disciplinary collaboration by exchanging knowledge in research and training activities on precision health.

Results:
From 2019 to 2023, 74 secondments are foreseen; staff involved will be trained on precision health research topics unavailable at their home institutions. The research topics include 5 domains: Integration of Big Data and digital solutions into healthcare systems; design and promotion of innovative citizen engagement models; education of healthcare professionals and leadership; HTA in precision health; Ethical-legal, social, organisational and policy issues surrounding precision health.

Conclusions:
Secondees will produce key reports, policy recommendations, scientific papers, and informative materials for citizens, fostering public-private interplay and fostering integration of precision health in the EU health systems, contributing to better health for EU citizens.

Key messages:

- Once the secondees are back in their home institution, they will use competences acquired during the secondment to advance the research, and transfer the knowledge to the home organization.
- Sharing knowledge,building synergies and expertise and encouraging best practices,among top-level institutions,will stimulate translational effort for implementing precision health in EU health system.

International, inter-university transferability of a student health surveillance system (SuSy) tool

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Introduction:
While university students are known to face major life transition challenges with the risk to engage in potentially undesirable health-related habits, there are very few attempts to monitor students' health behaviour on a regular long-term basis. Even in cross-sectional designs, students from the field of Public Health and/or Health Sciences are rarely investigated. Here, a cross-university students' health behaviour surveillance system is presented.

Methods:
A students' health and health behaviour surveillance system (SuSy) has been implemented in Hamburg University of Applied Sciences in 2014, collecting and analysing data of health sciences students twice a year since. After Manchester Metropolitan University joined the project and adapted SuSy to its specific context in 2016, data of both SuSy settings were compared using logistic regression models. In addition, focus groups were carried out in both universities in order to assess the perception and acceptance of the tool.

Results:
After eight elicitations with total sample of 1366 responses, a decreasing trend of smoking and increasing trend of cannabis consumption can be observed among Hamburg students. In comparison, Manchester students tend to smoke significantly more (OR = 3.74, 95%CI 1.95-7.17), but consume less cannabis (OR = 0.51, 95%CI 0.14-0.9). Trends in physical activity and healthy food consumption complete the overview. Focus groups revealed that SuSy is perceived as an appealing, useful and recognisable tool among students from both universities.

Discussion:
While being easily adapted in content and delivery, SuSy allows for the provision helpful, comparable information about students' health behaviours as well as for the observation of time trends. These findings underline SuSy's potential in promoting university students' health.

Key messages:

- The student health surveillance system (SuSy) tool allows comparable information about students' health behaviours as well as the observation of time trends.
- SuSy is perceived as an appealing, useful and recognisable tool among students from both universities.

Medical records completeness: can Link Professionals improve quality in a Rehabilitation Hospital?

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Background:
The completeness of Medical Record (MR) is an indicator of the quality of care provided. IMFR (Medical and Physical Rehabilitation Institute), a hospital part of the Udine Healthcare Trust with 400 discharges yearly, launched at the end of 2017 a MR-quality program based on the involvement of Link Professionals (LP): doctors, nurses and therapists specifically trained. The main aim of this study is to determine if involving LP would improve MR completeness and would keep it over time. The second aim is to describe the 1-year experience of MR completeness and professional attitude toward recording medical information in it.

Methods:
In December 2017 a new MR was introduced at the IMFR and its completeness was evaluated in January 2018. From January to April 2018, 17 LP educated all colleagues on the recording behavior through periodic meetings and focus groups. Then, LP peer-reviewed 20 inpatients paper-based MRs, assessing completeness, in April 2018 and then quarterly until January 2019. The evaluation was performed with a tool including a total of 73 items, divided in pertinence to the three professional figures involved. Feedbacks on MR completeness were given to professionals by LP in two-weeks. External data validation was performed to ensure data consistency. Significance ($p < 0.01$) was assessed by Cochran-Armitage test for trends.

Results:
The overall completeness of MR improved significantly from 59.6% (552 items out of 926; Jan-18) to 77.0% (738/959; Apr-18), settling to 78.3% (696/889) in January-19, with an overall trend of + 18.7%. Items pertaining to doctors improved significantly from 56.4% (217/385) to 81.4% (1173/1441), nurses' from 60.7% (165/272) to 78.6% (740/941), therapists' from 79.0% (79/100) to 91.7% (277/302). External validation results in 75% of agreement.

Conclusions:
The involvement of LP proved effectiveness in encouraging professionals behavior, supporting the MR completeness improvement and keep it over one year time.

Key messages:

- Professionals involvement and short-term feedbacks contribute to the healthcare quality improvement.
- Peer-reviewing medical records improves professionals attitude in recording behavior.

Educational requirements for Health Information Systems: A scope review of the literature

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Background:
Sound and reliable information is fundamental to decision-making across all health system. New information technologies can contribute to a more accurate and efficient public health action, requiring new and more sophisticated skills to support this change. Considering the European context, where public health professionals vary by country and cover different areas, and the need for a skilled workforce, the objective of this study is to identify the basic educational components required for a public health information specialist. This study is part of the ongoing research under INFACT Joint Action.

Methods:

A scope review (Pubmed/Ebsco, free access texts, no time restrictions) was carried out in order to answer the following question: Considering the set of activities of public health, what are the main topics and trends of the literature on both Human Resources and Health Information Systems (HIS) training? Abstracts were read by two reviewers and the select texts analyzed using HOT-FIT framework for HIS.

Results:

Among the 53 records, it was possible to identify different study designs and elements related to different contexts and HIS. There is a trend for new publications, with a significant increase since 2014. The content analysis showed more frequent themes in three main categories - Human, Organization and Technology, allowing identifying a wide range of public health professionals and their educational needs.

Conclusions:

Results reinforce the link between information systems and public health, showing the importance of regular HIS as data source for monitoring population health, specific events and determinants, management and research activities and during the stages of the planning cycle of public health activities. The proper workforce capacitation emerges as a success factor for HIS implementation, as well as several professional profiles that carry out public health activities and the areas where it is necessary to strengthen their training.

Key messages:

- There's growing interest in the use of technologies for the development of public health information systems.
- Workforce needs to develop specific skills for the technological challenges in Public Health.

Using technology and cross-cultural teams to deliver trauma-informed medication management

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Issue/Problem:

Cambodian Americans have high rates of mental health conditions, diabetes and cardiovascular disease. Unique risk factors include history of malnutrition, torture, social isolation, and poor social determinants of health. Community CARES is a trauma-informed model applicable to any trauma community with complex chronic health and mental health problems.

Description of the problem:

High-touch, high-tech approaches can improve access to culturally and linguistically appropriate medication therapy management (MTM) services. Over 12 months, pharmacists teamed with community health workers (CHWs) to provide MTM services in Connecticut and California. Face-to-face consultations occurred in Connecticut, while patients and CHWs in California used teleconferencing with the pharmacist in Connecticut. Project goals: improve drug therapy outcomes, reduce inappropriate medication use, improve medication adherence, display cost savings.

Results:

96 patients, average age 69, completed the project. Patients averaged 6.6 medical conditions and 10.3 medications. Pharmacists identified 604 medication-related problems, resolving 93%. Drug therapy outcomes increased 35%, medication adherence improved 23%, inappropriate medication use decreased 35%, and depression screening scores improved 25%. Return on investment ratio was 6:1, a savings of $3032/patient/year. Health improvements from face-to-face and telehealth MTM consultations were similar.

Lessons:

Healthcare workforce is optimized by linking CHWs with pharmacists and technology to deliver cost-effective MTM services. The approach is generalizable to populations challenged by distance, disability, language, or culture. Public health care policies need to reflect team approaches and value-based payment models.

Main messages: The virtual cross-cultural team MTM model for underserved populations has the potential to meet the triple aim goals of better care, better health, and lower costs in multiple settings.

Key messages:

- Virtual cross-cultural team MTM model for underserved populations.
- Meets the triple aim goals of better care, better health, and lower costs in multiple settings.

8.D. Infectious disease surveillance and control in the African region

Community hygiene against lassa fever disease and its predictors in a Nigerian rural settlement

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Background:

Lassa fever disease (LFD) is a viral haemorrhagic fever that is endemic in some West african countries where an estimated 300,000 to 500,000 cases and 5000 deaths occur yearly. The World Health Organization described it as a global health threat. At community level, its prevention relies on promoting good ''community hygiene''. This study was conducted to assess practice of community hygiene measures against LFD and its associated factors.

Methods:

A cross-sectional, community based descriptive study conducted during a LFD epidemic in a a rural community of Nigeria. An interviewer-administered questionnaire was used to collect data from 556 adult respondents, selected using systematic random sampling technique. Data was analyzed using SPSS.

Results:

A majority of the respondents were females (52.9%). Educational attainment was significantly associated with safe food storage at the multivariate level (aOR = 1.31, 95% CI: 1.10-1.54,P = 0.002) while having a good knowledge of LFD was a significant predictor of maintaining good housing standards (aOR = 3.73, 95% CI: 1.09-12.80,P = 0.036).

Conclusions:

Predictors of practice of community hygiene against LFD include education and having an excellent knowledge of LFD. To improve community hygiene practices in the community, there is need for a comprehensive LFD behavior change communication intervention.

Key messages:

- Cubing the global threat of LFD depends on its effective prevention in endemic West African communities.
- This study shows that such preventive measures are poor and there is need for more response to address the problem.

Asymptomatic malaria: building bridges with communities through patients in Côte d'Ivoire

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Background:

In malaria-endemic areas, asymptomatic carriers are a reservoir of parasites that contribue to the persistence of malaria transmission. In Côte d'Ivoire, this situation is poorly documented. The objective of our study was to assess the frequency and socio-environmental factors associated with asymptomatic malaria in the town of Assuefry, located in the northeast of Côte d'Ivoire, a region where malaria prevalence remains high.

Methods:

A cross-sectional study in two stages was conducted from October to December 2018, first at the Urban Health Center (UHC) in Assuefry and then in the households. The sample size calculated for patients was 162 extrapolated to 201 people. All persons received at the CSU who had clinical symptoms of malaria and a positive Rapid Diagnostic Test (RDT) were included. In the households of these index subjects, a follow-up survey allowed active RDT screening for malaria among all household members with no clinical signs of malaria. The socio-environmental factors taken into account were: the area of residence (urban or peri-urban), domestic animals husbandry, water storage at home, nearby garbage dump, wastewater collection and disposal system, type of housing and number of people in the household.

Results:

The frequency of asymptomatic malaria was 341 (38.8%) out of 879 household members visited. Both female and male gender was concerned (51% vs. 49%). The 5 to 25 years old group concentrated nearly 82% of all cases. Only domestic animals husbandry was associated with asymptomatic malaria at the household level (p = 0.021).

Conclusions:

The high frequency of asymptomatic malaria found in this study is a challenge for the National Malaria Control Program in Côte d'Ivoire. This should be taken into account while organizing control strategies.

Key messages:

- The frequency of asymptomatic malaria in Côte d'Ivoire is high. Control strategies must take into account in the guidelines the challenges of detecting and treating asymptomatic malaria.
- For the judicious use of antimalarial drugs, any subject with a positive RDT without clinical signs of malaria should receive a 'Drop - Thick' before treatment.

Surveillance of dengue: evolution of surveillance strategies during a large outbreak, Réunion, France

Jamel Daoudi

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Issue:

After a period of low-level circulation of a few cases per week during 2017, La Réunion experienced an outbreak of dengue in 2018 followed by a second and ongoing larger epidemic wave in 2019. Various surveillance systems have been progressively implemented to monitor and characterize the outbreak.

Methods:

All laboratory diagnoses of dengue are routinely notified to the regional health authority (RHA) for investigation. With the outbreak onset additional programmes were implemented including the monitoring of presentations to emergency departments (EDs) and hospitalisations of dengue cases. In addition, all death notifications to the RHA which cite dengue are reviewed by an expert committee and the cause of death classified as directly, indirectly or unrelated to dengue. Finally, weekly data from a sentinel network of general practitioners is used to estimate the number of community consultations with dengue-like illness across the island.

Results:

In 2017, 97 dengue cases were notified, with low level circulation continuing through the austral winter. In 2018, 6,679 cases (exclusively serotype 2) were notified. Western and southern regions of the island were most affected. The supplementary surveillance identified over 500 ED presentations for dengue-like illness and 160 hospitalisations. Three deaths were determined to be directly due to dengue, while 3 were indirectly related. Finally, there was an estimated 26,000 consultations for dengue-like illness in the community. After a second winter of persistent circulation, a second epidemic wave commenced in December 2018, and is still ongoing.

Lessons:

The implementation of additional surveillance systems enabled a better understanding of the magnitude and impact of the outbreak. The use of sentinel network allowed the estimation of the number of people affected in the community without a laboratory diagnosis. The ongoing viral circulation since 2017 suggests a high risk of endemisation of dengue on the island.

Key messages:

- The outbreak has had a significant impact of health and community health services, and on the wider population.
- The second consecutive austral winter with interrupted transmission suggest a high risk of endemisation.

Influenza-associated morbidity and mortality in Tunisia

Hind Bouguerra

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Background:

Influenza is a highly contagious viral infection representing a public health problem worldwide with more than 10% of the population affected each year. In addition, severe complications and deaths may occur especially among high-risk groups. Our objectives was to assess the severity of influenza in Tunisia from 2015 to 2017 and to identify the isolated circulating viruses.

Methods:

Basedon the network of ILI (Influenza-like illness) and SARI (Severe acute respiratory infection) Sentinel Sites and the National Influenza Center, we conducted a descriptive analysis of all data collected from 2015 to 2017. The case definitions of ILI and SARI were those recommended by WHO. Data entry was using Epi-Data and data analysis using SPSS-20.

Results:

The total number of SARI cases during 2016-17 season was 614. The hospitalization rate was 0.7% which was higher than the 2015-16 season (0.19%). The majority of these severe cases were males (60,3%) and the group aged more than 65 years was the most affected. Comorbidities were reported in 58,7% of the cases, especially cardiovascular diseases, obesity and asthma. In 2016-17, the viruses identified in SARI cases were type A(H3N2) (47,7%), type B (40,9%) and type A (H1N1) pmd09 (4%). The lethality rate was lower than in the previous season (0.32% vs 20%) with two deaths reported in February. These deaths were due to virus B and virus AH3N2, comparing to 77% of deaths due to virus A (H1N1) pmd09 the season before.

Conclusions:

Influenza severity vary from a season to another. The 2016-17 season was marked by higher rates of hospitalization but a lower lethality rate. This may be due to a lower circulation of the type A (H1N1) pmd09 virus, which virulence is much discussed. Influenza surveillance remains essential to detect any emerging novel pathogen and to guide decision-makers for future strategies.

Key messages:

- Seasonal influenza epidemics continue to have significant morbidity and mortality.
- Epidemiological and virological surveillance are highly essential for an early detection of epidemics and novel strains.

Hepatitis B vaccination status and vaccine immune response among children in rural Senegal

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Background:

Hepatitis B vaccination during childhood is key to reduce the prevalence of Hepatitis B virus (HBV) infection. In Senegal, a highly endemic country, the three-dose hepatitis B vaccine and the birth dose vaccine were introduced in the Expanded Programme on Immunization (EPI) in 2004 and 2016 respectively. This study aimed to determine chronic HBV infection prevalence, hepatitis B vaccination status and vaccine immunity among children in Senegal.

Methods:

A cross-sectional study including HBV screening was conducted at home among children aged 6 months to 15 years (i.e. born after the introduction of the HBV vaccine in the EPI) in the rural zone of Niakhar. Dried Blood Spot (DBS) samples were collected for the detection of HBsAg, anti-HBc Ab and anti-HBs Ab using chemoluminescence. Vaccination status was assessed using information on vaccination cards. Detectable vaccine immunity was defined with an adjusted DBS threshold of $DOI \geq 0.36$ IU/mL (corresponding to 10 IU/mL in venous blood sampling).

Results:

Between October and December 2018, 455 children were enrolled. Preliminary results show that 7/455 (1.5%) had been in contact with HBV (positive anti-HBc Ab) and 5/455 (1.1%) had chronic HBV infection (positive HBsAg).

Only 161/455 (35.4%) children had a vaccination card available. Among those, 150/161 (93.2%) received at least 3 doses of hepatitis B vaccine, of which 83/150 (55.3%) had detectable vaccine immunity. The proportion of children with detectable vaccine immunity was significantly higher in children <5 years than in children aged 5-9 and 10-15 (72.3% versus 47.3%, $p = 0.006$ and 72.3% versus 14.3%, $p < 0.001$).

Conclusions:

Preliminary results suggest a low prevalence of HBV chronic infection among children born after the introduction of HBV vaccination in Senegal. However, detectable vaccine immunity rapidly decreases with age among vaccinated children, signalling a need for further studies on the immune response to HBV vaccination in this context.

Key messages:

- HBV chronic infection is low among children born after the introduction of HBV vaccination in Senegal.
- Further studies on the immune response to HBV vaccination in this context are needed.

Multiple interventions to strengthen immunization services in an Angolan district

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Background:

Immunization represents one of the most effective intervention in public health. In the Sustainable Development Goals era, adequate vaccination services are still crucial for the prevention of infectious diseases and the reduction of under-5 mortality. However, in 2017 WHO estimated that children <1 year who did not receive the third dose of Diphtheria-Tetanus-Pertussis (DTP3) vaccine were 19.2 million globally, and 600000 of these were located in Angola, a Sub-Saharan country with an estimated DTP3 coverage of 52%. Since 2000, Italian Non-Governmental Organization (NGO) Doctors with Africa CUAMM supports the activity of the hospital of Chiulo in the commune of Mucope (district of Ombadja, south of Angola). Aim of the study is to describe the interventions implemented to strengthen the immunization services performed by the hospital Public Health Staff (PHS).

Methods:

In May 2018 the NGO started to implement multiple interventions to enhance the number of vaccine doses administered. Firstly, outreach immunization sessions were reorganized and reinforced, for example involving local Community Health Workers in the identification of villages with a high burden of unvaccinated children. Other actions were the continuous training of the PHS in data collection and the increased collaboration with the Ombadja District Health Department in order to develop a more efficient vaccine supply chain at local level.

Results:

In 2018, among children <1 year the PHS administered 19746 doses, with a 22.3% growth compared to 2017 (15349 doses). Doses administered during outreach sessions increased by 35.4% (6597 versus 4259 doses). Estimated DTP3 coverage in Mucope commune was 71% (2017, 59%).

Conclusions:

The WHO "Reaching Every Community" strategy emphasizes the importance of high quality immunization services in hard-to-reach areas. The organisation of well-functioning immunization services requires a multifaceted approach by the involved stakeholders.

Key messages:

- In 2017, globally 19.2 million of children <1 year did not receive the recommended three DTP doses. Six-hundred thousand were located in Angola.
- To obtain and sustain an adequate vaccination coverage, especially in hard-to-reach areas, multiple and well-coordinated actions should be implemented by all the involved stakeholders.

Sentinel physicians network in Reunion: an essential and key actor for epidemiological surveillance

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Issue/Problem:

The surveillance of seasonal infectious diseases in Reunion is based on a Sentinel physician's network of 52 volunteers, which is coordinated by the Indian Ocean regional office.

Description of the problem:

The main objectives are to identify and monitor outbreaks of infectious diseases like influenza-like-illness (ILI) gastroenteritis, dengue, and conjunctivitis. A virological surveillance set up to characterize circulating respiratory viruses from a nasal swab collected by the physicians. Swabs are tested by RT-PCR for influenza in the reference laboratory.

Results:

The surveillance demonstrated that the influenza season during the 2018 austral winter ran from September to October. More than 55 000 consultations related to ILI were estimated. The virological surveillance confirmed the circulation of A (H3N2) principally in 2018. The physician's network identified the first cases of chikungunya in Réunion Island in 2005 and data collected by this physician's network provide the epidemic trends with weekly estimation's of total numbers of consultations in the Reunion Island. More than 25 000 community consultations of dengue-like-illness have been estimated. The physician's network took part in the surveillance of conjunctivitis outbreak in 2016 and identified an outbreak of norovirus gastroenteritis in Reunion Island in 2007 and 2012.

Lessons:

This network is an essential tool for disease surveillance and control activities.

Key messages:

- The network provides provisional virological and severity data on circulating influenza several months before the onset of influenza season in mainland France.
- The network is engaged and active which enables the early detection of any emergent diseases.

8.E. Informing the health policy process

Health and healthcare in the year 2040 – Facts for planning a complex and uncertain future

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Background:

In the Stockholm region, a regional political assembly is responsible for health care services for a population of 2.3 million. In November 2017, the political leadership decided on a programme to project health and healthcare developments in the Stockholm region until 2040 as a basis for a longterm health plan. This presentation aims to describe the methodology used, share some results and raise some questions for further work. Through the presentation we also seek collaboration with European partners involved in similar health planning work.

Methodology:

Six perspectives for analysis were defined and under each a set of areas for deeper analysis identified. It was agreed that the planning should be fact-driven. Under the constraint of availability, data covering the period 2000 to 2017 was collected for around 90 variables. Data was gathered from various publicly available databases and was analysed in Microsoft Excel.

Results:

Stockholm's population increased continuously since the millennial shift and could increase by another 28% until 2040. Since 2000, life expectancy increased by 2 years for women and 3 years for men. More than 85% of the burden of disease is caused by chronic diseases. However, the overall disease burden per 100 000 population has been decreasing over the years. In 2017, more than 21 million outpatient care visits were done. Extrapolations of these trends show that the disease burden per capita will continue to decrease, but the total burden of disease as well as demand for health care will continue to increase.

Discussion:

A fact-based analysis of future health and healthcare proved to be an efficient base for planning and discussions of future health care services. Results confirmed some well-established perceptions of developments but also pointed to some misconceptions and established "facts" that proved to be false. New digital services make prediction of the future health service mix dynamic and challenging.

Key messages:

- To meet future health care needs, future health and health care trends should be planned for and considered in decision making processes.
- Forecasts and health care planning should be fact-based to have an as accurate picture of future health and health care trends as possible.

The Public Health Implications of Brexit in Wales: A Health Impact Assessment (HIA) approach

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On March 29th 2019, the United Kingdom was due to exit the European Union (EU) in a process known informally as 'Brexit'. The 2 years before this time (and ongoing) experienced a period of unprecedented political and social upheaval with many unknowns and much uncertainty attached to the outcomes and future impact of withdrawal and transitionary period.

Public Health Wales commissioned the Wales Health Impact Assessment (HIA) Support Unit to carry out a HIA of Brexit in Wales to assess the potential impact, extent and nature of 'Brexit' on health and wellbeing in Wales which would to inform its planning, future work and support other bodies decision-making, planning and policymaking.

A comprehensive HIA was conducted over a 6 month period in 2018/19, steered by a Strategic Advisory Group. Methods included; a literature review; stakeholder workshop; interviews with policy leads, a community health profile, and report with evidence synthesis.

Trade agreements, economic impacts, changing relationships with EU agencies, uncertainty and loss of regulatory alignment were key pathways for health impacts to occur. Potential impacts included; food standards/safety; environmental regulations; working conditions; and health and social care. Many impacts will affect the whole population. Vulnerable populations included; children/young people; those at risk of unemployment;Welsh areas receiving significant EU funding. Potential indirect impacts were identified on mental wellbeing.

Brexit has the potential to impact significantly on the determinants of health.The HIA has informed and influenced cross-sector planning and policy in response to the short/long-term implications of Brexit to ensure that health and inequalities are considered at every juncture.This unique work demonstrates continued leadership by Wales in the field of impact assessment and 'health in policies' and has been positively received. It has transferable learnings for many nation states and health policy leads.

Key messages:

- Brexit is a major policy change with major health impacts.
- HIA is an informative and influencing process to support planning and future policy making.

Danish policymakers and research evidence in public health policy process

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Background:

Evidence-informed policymaking in public health, understood as interaction of the best available research evidence and ''other types of evidence'', is known to have sound influence on population well-being. However, lack of using and producing research evidence by public health policymakers has been well documented. The aim of this study was to assess policymakers' research involvement in the research process as well as motivators and barriers for the use and production of research evidence.

Methods:

A cross-sectional online survey was carried out in the period of Dec 2018 - Jan 2019 using a pre-tested, self-administrated questionnaire. Participants were Danish policymakers' members of the Danish Society of Public Health (DSPH) and with practical experience being involved in a health policy-making process. The questionnaire was distributed through the DSPH members email list. Reported outcome variables; for this abstract are parts of the larger study: health policymakers' research involvement in the last 12Mo; policymakers' motivators and barriers to use and produce research in policy-making.

Results:

Response rate: 100/480 (15%). 78% were involved in critical evaluation of research for policy-making; 77% were able to identify relevant research literature; 41% did not use research evidence; 40% did not conduct any surveys; 57% did not write research reports; 65% never used reference systems; 46% did not analyze any research data. The three motivators reported to use and produce research in the last 12Mo were: identification of the problem that needs to be addressed; development of research skills; and job satisfaction. The three main barriers were: other job-related priorities; lack of time for research; lack of research funding.

Conclusions:

This study reinforced that public health policymakers need more practical knowledge and skills as well as organizational support and management to use and produce research evidence for evidence-informed policy-making.

Key messages:

- Successful evidence-informed policymaking requires capacity-building interventions targeting policymakers, supported, implemented and evaluated by their organizations.
- Policymakers do not dismiss evidence-informed policy practice, but their ''positions'' and conditions at a work place sometimes do not allow them to fully follow it.

Situation analysis on evidence-informed health policy-making in Poland

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Background:

Over the last few years, increased international attention has been paid to bridging the gap between health research and policy-making. The situation analysis on evidence-informed policy-making (EIP) in Poland aims to increase understanding of interactions among a country's research and policy-making communities, to determine where and how to best establish a knowledge translation platform (KTP), i.e. an organization or network that through its structure and functioning brings the worlds of research and policy together.

Methods:

The methods were guided by the EVIPNet Europe Situation Analysis Manual and included a literature review, key-informant interviews and survey data analysis.

Results:

In Poland, the existence of incentives or requirements stipulating the use of research evidence in health policy varies, depending on the type of policy. The use of evidence is a standard practice in drug policy, and in decisions related to the inclusion of services in the health benefit package. In other areas, some good practice examples of using evidence in policy can be identified. Yet these are rather individual, isolated and bottom-up initiatives, which neither occur systematically, nor routinely. Key challenges in view of strengthening a systemic approach to EIP relate to: overlapping mandates of key health system and research institutions, generally low research capacity and lack of knowledge translation skills.

Conclusions:

Establishing and operationalizing a KTP can be an effective means of supporting sustainable EIP. Building such infrastructure, however, is a longer-term and complex process that needs to be based on the current characteristics of the country's EIP landscape. The proposed model of a future KTP in Poland is a network with a joint secretariat within the Ministry of Health. Such form can take advantage of existing organizations' competencies via information exchange and cooperation.

Key messages:

- Although systemic mechanisms for evidence-informed health policy are missing in Poland, its importance is recognized among major health system stakeholders.
- The proposed model of a future knowledge translation platform in Poland is a network with a joint secretariat within the Ministry of Health.

Towards a deliberative approach in public health policy making

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The time when public health policies could be based solely on expert opinion has gone. Public opinion has a real impact on the effectiveness of public health policy. However, for complex issues such as vaccination, screening, GMO's, privacy and data governance, public opinion is divided. How to integrate divided public opinions into a well-structured health policy? In Belgium, as in many other countries, policy makers have started to turn to deliberative processes to guide policy making with citizen involvement, especially in ethically contentious areas.

Deliberative processes aim to involve citizens in policy making in a setting where individual opinions and interests are weighed honestly and fairly, so that through well informed deliberation common ground can emerge. Participants are informed by a neutral information package, a variety of experts and facilitated discussions. In a very transparent way, these positions are molded into tailored policy inputs. In Belgium, such initiatives have recently been organized on biobanking, genomics, e-health, reimbursement policies and more. In France, the government is obliged by law to organize a comprehensive deliberative public consultation on bioethical issues every seven years.

Especially in areas that require a large degree of trust, a deliberative approach ensures policies that can be supported by people with diverse views. They offer a viable alternative to traditional models of power and conflict that is more suitable to governance in 21st century democracies. They allow citizens to make a meaningful contribution to topics they may not have been familiar with beforehand, but that do touch on their private lives and interests.

The most recent Belgian initiative resulted in nine concrete policy inputs for the implementation of genomics in health care, presented directly by the citizens to the Minister of Public Health. The French initiative is the basis for the current review of the law on bioethics in parliament.

Key messages:

- Public health issues touch the interests of all citizens: citizen deliberation should be regarded as an important input for public health policies.
- A deliberative approach enhances public trust, especially in areas of social or ethical contention.

Health is not for sale, is it?

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Issue/problem:

Health is not for sale, given that one cannot buy health as a guaranteed commodity. Human beings co-produce their health every day together with their (social) ecosystems. As such, being healthy is a co-adaptive, complex, and self-organizing enterprise. However, our current economies thrive on citizens who consume themselves ill, and buy health care to fix their diseases. With spiralling costs of healthcare, a shift is urgently needed towards making a business case for health.

Description of the problem:

From 2014 onward, the Dutch Federation for Health invested in the development of a business case for health. They explored the following questions: 1) Why is a business case for health warranted? 2) What could such a business model theoretically look like? 3) How could it be co-created in practice?

Results:

- We found there is a business case to keep diseases going, driving healthcare expenditure up. Literature suggests that this business case for disease is untenable.
- Inevitably we need new incentives that keep 'health' going rather than disease. We need a mechanism to make the business care for health.
- We have begun to model one approach named the 'vitality contract', featuring 10 organizational principles which provide guidance on how to construct the right market structure for health to be co-produced and sold on the premises of an ecosystem.
- The Federation for Health has been championing this vitality contract, and succeeded to get it on the national policy agenda. However, co-creation is essential for it to work: only few coalitions have risen to the challenge to make such a 'vitality contract' work in practice.

Lessons:

The business case for health is needed. The vitality contract might provide one approach to demonstrate how it could be co-created in different local contexts and different public health systems. To be more impactful, further co-creation and collaboration from national coalitions and other European countries may be required.

Key messages:

- With spiraling costs of healthcare, a shift is urgently needed towards making a business case for health.
- The Dutch 'vitality contract' might provide one approach to demonstrate how a business case for health could be co-created.

Southeastern Regional Health Information System: a mapping tool for public health actors

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Issue/problem:

Local public health actors often need to identify public health priorities in their territories to guide public health policy and/or action.

Description of the problem:

The Southeastern Health Regional Observatory (ORS Paca) has been developing since 2006 a health information system for Southeastern France (SIRSéPACA). The objective of this mapping tool is to give access to regional and local public health actors to public health indicators for various population groups and geographical scales (municipality, districts...) within the region.

Results:

Indicators are displayed under the format of maps and tables on the following topics: morbidity, mortality, health social, economic or environmental determinants. Indicators are constructed using national and regional databases (open or accessible through agreements). SIRSéPACA is in free access (www.sirsepaca.org) and regularly updated. A function allows the users to obtain a portrait for a defined geographical area and to obtain in one click a description of various indicators (socio-economic and demographic characteristics, mortality and morbidity causes, health care and prevention, environmental health). Indicators for a given territory can be compared to the regional average (or another area). SIRSéPACA is regularly used to provide a description of the main public health characteristics of territories (''territorial diagnose''), e.g. to help health professionals intending to set up of a multidisciplinary group practice designing their project.

Lessons:

Trainings on how to use the tool, interpret the maps produced, and about territorial diagnoses implementation are regularly done. We are also developing a similar tool for all French regions for the Ministry of Health.

Key messages:

- SIRSéPACA facilitates access to and overview of a lot of indicators and data for local public health actors.
- This regional experience has been expanded to national level.

The EU Health Promotion and Disease Prevention Knowledge Gateway

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Issue/ problem:

Unhealthy diets, physical inactivity, alcohol and tobacco use are leading risk factors for non-communicable diseases. They are all modifiable and health promotion policies can support that.

Description of the problem:

However, information overload, controversies and uncertainties, budget constraints and difficulties in balancing disparate interests are common challenges that can hamper action by policy makers in the field of public health. To support them, the European Commission has created the Health Promotion and Disease Prevention Knowledge Gateway. It is a reference point for independent and reliable information to assist policy making; it summarises both the data and knowledge needed to support prioritisation of public health policies and justify investments in health promotion.

Results:

The Knowledge Gateway currently covers the areas of nutrition, physical activity, alcohol, marketing of foods and beverages, and related societal impacts such as disease burden and health inequalities. These topics have been prioritised by Member States representatives and policy makers. The content is organised into concise, well-structured briefs which include definition of each issue, health related effects, and examples of policy recommendations and implemented policies. The high-quality source documents are selected in a tiered approach and are mainly authored or endorsed by authoritative public health organisations.

Lessons:

Judging by the positive feedback received, the Knowledge Gateway is being used widely across Member States and stakeholders. The content of the Knowledge Gateway will be further expanded to support other health priorities such as mental health promotion. Policy makers have a unique, trusted ‘‘one-stop-shop’’ with high quality information to support, justify and strengthen the development of public health policies and health promotion.

Key messages:

- The use of reliable authoritative information for the development of public health policies can support the prevention of major non-communicable disease risk factors.
- The EU Knowledge Gateway is a unique reference point of reliable, independent information to support policy making in the area of public health.

8.F. Promoting child centred health systems

Validation of a Screening Tool for Social Vulnerability in Pediatrics

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Background:

Screening for social vulnerability is emphasized improve access and quality and of healthcare. In pediatrics although some specific tools exist, a global screening tool for social vulnerability and access to healthcare was missing. A Vulnerable Child Scale (VUCHIS) was developed with expert focus groups. It included short evaluation about several issues: medical follow-up, health assurance, children schooling, housing, close entourage, comorbidities, recent migration, language comprehension and food insecurity. Fifteen items were addressed in a short and easy to translate interview. The aim of this study was to validate this tool.

Methods:

This multicenter study was conducted in two pediatric emergency departments in France. VUCHIS questionnaire was completed by the emergency department caregiver. Another blinded interview with a social worker, expert in social vulnerabilities diagnosis, was conducted to assess the need for care in a clinic for socially vulnerable children. Clinical exam was recorded. The main criteria for this study was the clinimetric properties of VUCHIS compared to the expert caregiver opinion.

Results:

480 children were included. Their mean age was 8.3 years (SD = 3.8); 264 (55.0 %) were boys. The expert evaluation identified 57 (11.9 %) children with social vulnerabilities. VUCHIS ranged from 0 to 79 (mean = 6.9; SD = 14.7). ROC curve area was 0.83 (SD = 0.04). The selected diagnostic threshold was 10. This showed sensitivity = 0.70; 95% confidence interval (CI) = [0.56; 0.81]; specificity = 0.89; CI = [0.86; 0.92]; positive likelihood ratio = 6.60; CI = [4.77; 9.12] and negative likelihood ratio = 0.33; CI = [0.22; 0.50].

Conclusions:

VUCHIS has good clinimetric qualities that will promote the screening of social vulnerability in pediatric clinical practice.

Key messages:

- Pediatricians need global and easy-to-use tools to implement social vulnerabilities in their clinical routine, especially in emergency departments.
- Implementing tool-mediated screening for social vulnerabilities in pediatrics prevent inappropriate orientation and prescriptions and poor therapeutic adherence.

Can nurses improve self-management among pediatric patients? A systematic review and meta-analysis

Corrado De Vito

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Background:

Few studies report educational interventions for pediatric patients with asthma or diabetes type 1 as a fundamental instrument to engage them and improve their health. The aim of this systematic review and meta-analysis was to synthesize evidence about behavioral changes in life style, disease management and clinical outcome in pediatric patients after a structured educational intervention delivered by nurses.

Methods:

A systematic review of the literature was carried out in MEDLINE, Scopus and CINHAL including only RCTs. Methodological quality of the studies was assessed using Cochrane tool. Meta-analyses on HbA1c reduction for diabetes and hospitalization, emergency department (ED) visits and medication for asthma were carried-out.

Results:

Of the 3559 papers initially retrieved, 5 regarding diabetes and 19 asthma met the inclusion criteria for the systematic review and 14 for the meta-analyses. Included studies were highly heterogeneous in terms of type of intervention and follow-up duration. Almost all the studies showed an improvement but only few were statistically significant. All studies regarding diabetes showed a low risk of bias (only one RCTs had a high risk of bias in one domain), while almost all RCTs on asthma showed a high risk of bias. The pooled mean differences in favor of the experimental groups were: HBA1c -0.02 (IC95%: -0.26 - 0.22), Hospitalization 0.58 (IC95%: 0.19 - 1.78), Medication -0.10 (IC95%: -0.43 - 0.23), ED Visits 0.82 (IC95%: 0.44 - 1.54).

Conclusions:

There is a general agreement about the central role of educational intervention delivered by nurses to pediatric patients and the assessment of the behavioral changes after educational interventions is strongly recommended in pediatric population. However, more efforts are requested in designing studies on patients with asthma and to program more appropriate follow-up and periodic recall in order to engage pediatric patients in the management of their own chronic disease.

Key messages:

- educational intervention delivered by nurses to pediatric patients with asthma or diabetes type 1 as a fundamental instrument to engage them.
- more efforts are requested in designing studies on patients with asthma and to program more appropriate follow-up and periodic recall in order to engage pediatric patients.

Importance and feasibility of implementing child and parent centeredness in routine care

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Background:

Child and parent centeredness (CPC) are important determinants of the quality of care for children with chronic health conditions. However, little is known about the perceptions of healthcare professionals on the importance and feasibility of implementing CPC in routine care, although both might be key for the successful implementation of CPC. We therefore assessed the perceptions of healthcare professionals concerning this matter and analysed, how familiarity with the International Classification of Functioning, Disability and Health (ICF) might strengthen CPC.

Methods:

Cross-sectional data was collected in 12 specialized interdisciplinary outpatient centres providing treatment for children with chronic health conditions in Germany. The standardized questionnaire covered (1) the importance of implementing child (CC) and (2) parent centeredness (PC) as well as (3) the feasibility of implementing CC and (4) PC in routine care (based on Arnetz et al. 2008, Patient Involvement Subscale) and (5) the prior use of the ICF. Bivariate associations were assessed with permutation tests.

Results:

In total, 206 healthcare professionals were surveyed (response rate: 47 %). The perceived feasibility of implementing CPC fell short of their importance ($p < 0,001$). Moreover, CC was ranked lower than PC in terms of both importance and implementation feasibility ($p < 0,001$, respectively). Prior use of the ICF was associated with higher importance of CC ($p < 0,001$) and PC ($p = 0,01$).

Conclusions:

While the importance of CPC to healthcare professionals was high, the active involvement of children and the routine implementation of CPC were perceived as challenging. Interventions to facilitate the implementation of CPC should therefore comprise hands-on implementation strategies and put a special focus on how to involve children in routine care (e.g., through special communication techniques). Including the ICF as a conceptual framework in interventions to foster CPC could be a facilitator.

Key messages:

- While child and parent centeredness are important to healthcare professionals, their implementation in routine care and the active involvement of children are challenging.
- Interventions to foster the implementation of child and parent centeredness should include concrete practical implementation strategies and put a special focus on the involvement of children.

Exposure to car smoking among youth in seven countries of the European Union

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Background:

In the USA and Canada, cars are a major source of secondhand smoke (SHS) exposure among youth. Little is known about the magnitude of this public health problem in European countries. In this report, we study SHS exposure in vehicles among adolescents across 7 member states of the European Union (EU), with a particular focus on socio-economic characteristics and adolescents' smoking environment.

Methods:

Data on self-reported SHS exposure in cars during the past seven days was obtained from the 2016/17 cross-sectional SILNE-R study from 14-17-year old adolescents in EU seven countries ($N = 10,481$). We applied two multivariate logistic regression models with sociodemographic characteristics and mediating smoking-related factors.

Results:

SHS car exposure varied widely across the 7 EU countries: 6% in Finland, 12% in Ireland, 15% in the Netherlands, 19% in Germany, 23% in Portugal, 36% in Belgium and 43% in Italy. Low paternal educational levels were strong correlates of SHS exposure in cars as well as migration background. Other correlates were one's own smoking status and the relation to the family and peer smoking environment, such as parental smoking, permissive smoking rules at home, and best friends smoking.

Conclusions:

In most of these seven countries, a considerable proportion of youth, particularly those from disadvantaged backgrounds, is exposed to SHS in cars. There is a need to ensure adoption and sustained enforcement of smoke-free car legislation. Given the long-term effectiveness of smoke-free car policies, our finding suggests that such policies can contribute towards reducing smoking inequalities.

Key messages:

- We assessed adolescent secondhand smoke (SHS) exposure in cars in 7 EU countries, which varies widely, ranging from 6% in Finland to 43% in Italy.
- The findings point to a social gradient, environmental factors in SHS car exposure and call for the rapid implementation of smoke-free car legislation.

Sleep habits and sleep characteristics at 1 year-old in the ELFE birth cohort study

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Infant sleep plays a critical role in his/her normal development. Sleep problems, including sleep onset difficulties (SOD) and night waking (NW), ranges from 20% to 30% in infants and young children and are partially persistent over time up to adulthood. French young children seem to have longer sleep durations and less sleep troubles than their counterparts worldwide. We here aimed at describing infants sleep characteristics (duration/24h (TST), NW, and SOD) and associated sleep habits in infants aged 1 year old from the French nationwide birth cohort ELFE.

This study included 11,571 infants with information on both sleep characteristics and sleep habits (parental presence when falling asleep, eating to fall asleep, sucking pacifier or finger to sleep and the location where the infant falls asleep and ends his/her sleep). Associations were studied using multinomial logistic regressions adjusted for familial and infant characteristics.

Mean TST was 13hrs36 including 2hrs54 of naps, 20% of the infants had TST $\leq$12hrs/24h. About 46% did not present SOD or NW, while 16% had frequent SOD and 22% had NW $>$ 1 night over 2. Parental presence, feeding to fall asleep and infants sleep location were more frequent in infants having short sleep duration ($\leq$12h/24h), NW and SOD. Non-nutritive sucking was associated with NW, SOD and TST>14h/24h.

This work provides new information regarding infant sleep location and non-nutritive sucking that should be accounted for when considering sleep behaviors. In addition, most of identified sleep habits associated with poor sleep characteristics are accessible to prevention.

Key messages:

- French infants present better sleep characteristics than their counterparts.
- Most sleep habits associated with poor sleep are accessible to prevention.

Impact of sleep and screen times on incidence of overweight in European children and adolescents

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Background:

A deeper understanding of the modifiable risk factors leading to excess weight in children and adolescents can provide unique opportunities for preventing the immediate and long-lasting health consequences of overweight. The aim of the study was to explore independent, prospective associations of screen time and sleep duration with incident overweight in a sample of European children.

Methods:

Data from 4285 participants of the IDEFICS/I.Family cohort who were followed-up from 2009/2010 to 2013/2014 was analyzed. Hours per day of screen time and sleep duration were collected by parental report at baseline. Logistic regression analyses were carried in separate and mutually adjusted models controlled for sex, age, European country region, parental level of education and baseline BMI z-scores.

Results:

At baseline screen time (hours/day) and sleep duration (hours/day) were inversely correlated behaviors (rs = -0.226, p<.001), indicating the necessity of exploring their separate and joint effects on the weight trajectory. In the non-overweight/non-obese population at baseline (N = 3734), separate models suggest that every hour increase on screen time and every hour decrease on sleep duration were associated with higher odds of the child becoming overweight or obese at follow up (OR = 1.156, 95% CI 1.015-1.316 and OR = 1.226, 95% CI 1.053- 1.428 respectively). In the mutually adjusted model, the screen time association was attenuated to non-significance (OR = 1.125, 95% CI 0.986- 1.284), while the association with sleep duration was also attenuated but remained statistically significant (OR = 1.198, 95% CI 1.026-1.398).

Conclusions:

Both screen time and sleep duration are significant predictors of incident overweight in children and adolescents. However, according to our results sleep duration plays a stronger role than screen time, suggesting an increased value of overweight prevention strategies that emphasize adequate sleep duration.

Key messages:

- A holistic and integrated approach is needed to prevent overweight from early age and with a life-course perspective.
- New strategies for overweight prevention could benefit from prioritizing interventions that promote adequate sleep duration and reduce excessive screen time.

Estimation of direct cost related to asthma among school-age children with asthma

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Background:

Childhood asthma still imposes a substantial burden on the health care system and community. Its management requires a significant direct cost. Several factors can influence the cost of asthma management, particularly severe asthma. There is scant information about the predictors of asthma-related cost. Thus, the purpose of this study was to estimate direct asthma-related cost among children with chronic asthma and to identify factors that have the greatest contribution to change it.

Methods:

This cross-sectional study was carried out in Farhat Hached University Hospital in Sousse (Tunisia, Africa) over a period of three months (April-June 2018) among children with asthma aged 7-17 years. The direct cost was defined as the costs of health resources utilization and medication related to asthma in the past 12 months. Purchasing power parity technique was used to convert TND to USD. Multiple linear regression was performed to examine the association between dependent and independent variables.

Results:

A total of 90 subjects participated in the study. The mean age was 9.81±2.56 and 55.6% were male. The annual mean of the total direct cost was USD 616.71±454. Multivariate analysis showed that the severity of asthma, inhalation technique and emotional domain of QOL predict asthma cost and that the latter was the best predictor (p = 0.005, p = 0.03, p = 0.004, respectively). This data indicates that for one child with mild asthma, correct inhaler technique, and moderate impairment of emotional function QOL domain, estimated asthma direct cost was equal to 1035.21 USD per 12 months.

Conclusions:

This study showed that higher severity of asthma, incorrect inhaler technique and a lower score of emotional function increased direct cost related to asthma. These results are useful for health care providers and community since they provide information about the impact of modifiable risk factors on direct asthma cost.

Key messages:

- For one child with mild asthma, correct inhaler technique, and moderate impairment of emotional function QOL domain, estimated asthma direct cost was equal to 1035.21 USD per 12 months.
- Higher severity of asthma, incorrect inhaler technique and a lower score of emotional function increased direct cost related to asthma.

8.G. The breadth of public health

Models and evidence of intersectoral cooperation in prevention and health promotion

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Background:

Inter-sectoral coalitions are regarded as a key principle of health promotion. The study examines the questions of how these are defined, which scientific theories and models are available, and which methods and parameters are used for their evaluation.

Methods:

The scoping review in three databases (PubMed, Web of Science, LIVIVO) included studies in English and German published in 1/2010 to 5/2018. The results were analyzed qualitatively. In addition, relevant websites and textbooks in the field of public health, health promotion and social work were subjected to a document analysis in an iterative procedure.

Results:

The database searches yielded 186 hits, of which 48 publications were systematically examined. Document analysis revealed 128 materials. Six common terms on inter-sectoral cooperation (network, collaboration, partnership, coalition, cooperation, alliance) were identified. Uniform definitions and unambiguous distinctions do not exist. Overall, only a few of the identified inter-sectoral collaborations are theoretically based, nine publications present models. Only seven studies provide insights into the effectiveness of model/theory-based strategies, whereby these almost exclusively examine output parameters. In particular, there are parameters on structure and process (e.g. team functioning, coalition capacity). Qualitative success factors and barriers were identified (e.g. integration of different actors, development of new financial sources, formalization). Eight validated instruments are identified. Four studies also examine the outcome level and demonstrate intended effects on behavioral parameters.

Conclusions:

For research and practice, it is necessary to sharpen the terminology of intersectoral cooperation. Existing models should be systematically used and evaluated. In the future, an evaluation of the outcome of inter-sectoral cooperation and long-term effects will be increasingly necessary.

Key messages:

- Inter-sectoral coalitions are an evolving field, and both their theoretical foundation and empirical testing are still in their infancy.
- While success factors are well investigated, evaluations at the outcomes level are particularly necessary.

The development of a monitoring instrument to measure the strength of health promoting systems

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Background:

In the region of the Municipality Health Services Gelderland-South, each municipality has its own health broker. He or she advises the local policy makers, signals/pleads for addressing health problems, and facilitates effective approaches. By doing this health brokers try to strengthen the local health promoting system. To show the results of health brokers and to monitor changes of the local health promoting system, the MHS needs a monitoring instrument. The aim of this study was to develop this instrument and to test it in practice.

Methods:

Participatory action (qualitative) research is used to develop an online questionnaire. Structured group processes with the health brokers has led to the identification and definition of eight variables, reflecting the health promoting system: collaboration, support, integrated approach, visibility of results, health monitor data assessment, consistency, reach of the target population and sustainability. A literature study identified appropriate instruments. The online questionnaire is expanded to test the reliability, to evaluate the usability and to gain insight into the strength of the health promoting system in 16 municipalities.

Results:

The questionaire is based on validated questionaires like the Coordinated Action Checklist, and contains 28 items. Sumscores per variable ranged from 0 (weak) to 100 (strong). Health brokers and their partners (N = 147, 4-9 per municipality) filled out the questionnaire. Support and collaboration had the highest mean scores (70,5 resp. 69,8), and visibility of results and sustainability the lowest (61,3 resp. 59,4). Differences between municipalities were identified and can be used to know which variables can be improved. The test-retest reliability (mean r = 0,713) and the Crohnbachs alphas (all > 0,70) were reasonable good.

Conclusions:

The questionnaire can help to provide useful insights in the strengths and weaknesses of the local health promoting system.

Key messages:

- Eight variables reflect the health promoting system: collaboration, support, integrated approach, visibility of results, health monitor data assessment, consistency, reach and sustainability.
- The questionnaire can help to provide useful insights in the strengths and weaknesses of the local health promoting system.

The necessity of applying Rasch measurement theory in questionnaire-based public health research

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Background:

Questionnaires are frequently used in public health research. In order to provide valid and reliable results to generate recommendations for practice and policies, scales with sound psychometric properties are required. Classical test theory such as factor analysis is most frequently used to assess the psychometric properties of scales. However, classical test theory may have limitations in confirming the validity of scales. Only Rasch measurement theory meet the requirements of fundamental measurement, such as additivity, invariance, sufficiency and specific objectivity. The objective is to exemplify how Rasch measurement theory can be used to evaluate the psychometric properties of a scale. Validation of the Hopkins Symptom Checklist-10 is used as an example.

Methods:

This study is based on cross-sectional data from the Youth Data Survey. In total, 6777 adolescents responded to a web-based questionnaire. Data collection was carried out in lower and upper secondary schools in Norway during 2018. The data were analysed using the partial credit parameterization of the unidimensional Rasch model.

Results:

Preliminary results indicated that the scale had acceptable reliability (person separation index: 0.82). However, one pair of items shows response dependence. The targeting could have been better (mean person location: -1.445). All items had ordered thresholds. Three items under-discriminated. Several items displayed differential item functioning with regard to gender and school level.

Conclusions:

Applying Rasch measurement theory measurement problems that would go undetected using classical test theory approaches were observed. Scales used in public health research should be thoroughly validated applying Rasch measurement theory before the data are used to support claims about public health and used to provide recommendations for policy and practice.

Key messages:

- Public health practice and policy should be based on information from valid and reliable scales.
- Rasch measurement theory should be used to evaluate psychometric properties of scales used in public health research.

Tuberculosis contact investigations in congregate settings in Rome, Italy: contribution of migration

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Background:

In middle to low incidence countries tuberculosis (TB) is known to concentrate in big cities as national incidence falls: in the last decade TB incidence in Rome metropolitan area and in Lazio region has been higher than the national estimates; TB incidence among foreign born fell by more than half despite remaining higher than among Italian born.

We aimed to describe the current dynamics of TB transmission among residents of our local health unit in Rome metropolitan area in order to drive specific TB control interventions at local level.

Methods:

We retrospectively evaluated characteristics of TB cases and results of contact investigations among the residents of ASL Roma 2 in congregate settings over year 2018.

Results:

Overall 217 TB cases were notified, of which 70.5% with pulmonary involvement. Male/female ratio was 2.4/1 and age group most affected was 25-44 among foreign born and >65 among natives. During the study period foreign born cases accounted for 65% of the total number of TB cases. 19/141 (13.5%) foreign born patients were hosted in a reception center. 479 exposed close contacts were screened, with no evidence of secondary TB disease transmission. No identifiable links were found among cases occurred in the same immigrant reception center.

Conclusions:

Italian guidelines recommend symptom screening for TB and LTBI testing both of new entrants and of long term residents - including second–generation migrants- from high TB burden countries. These findings suggest that local public health efforts should prioritize the identification of reactivations of remotely acquired latent TB rather than of new postarrival infections acquired in the host county through local transmission.

Key messages:

- City-specific data on TB incidence trends among native and foreign-born residents help understanding the wider interaction between migration and TB.
- To prevent TB incidents in congregate settings remotely acquired latent TB should be targeted.

Mesothelioma: a rare cancer in the Valencian Region's Cancer Registry (Spain)

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Background:

Malignant mesothelioma is a rare type of cancer. The estimated incidence in Spain is 535 cases per year, being more frequent in men and reaching the highest rate of incidence between the ages of 60-70. Objective: to determine the characteristics of those affected by the mesothelioma in the Valencian Region during the period 2005-2016 and identify the temporary evolution.

Methods:

A cross-sectional study was performed. Cases were identified through the Valencian Region's Cancer Registry (VCR), those registered between 2005-2015 were identified by the ICD9-CM (code 163*) and 2016's by the ICD10 (code C45). Cases were validated through the review of clinical documentation. The incidence and mortality were calculated and a descriptive analysis was developed including clinical, demographic and social characteristics.

Results:

379 cases were identified and confirmed. 58.4% of the cases were men and the average age of diagnosis was 67 years. 85.1% were Spanish. 87.3% of cases had died and the average age of death was 70 years. An increasing incidence has been observed, being 11.4/1000000 inhabitants (CI95%:8.4-14.3) in 2016. The malignant mesothelioma morphology distribution was: 45.1% epithelial, 43.8% non-specified, 6.6% fibrous and 4.5% in two-phase. In 90.8% of the cases the assessment used to confirm the diagnosis was the primary tumour's histology, in 3.7% was a cytology or hematologic analysis, in 2.6% was metastatic tissue histology, in 1.3% were clinical signs, in 0.5% was other clinical test like MRI/CT scan, in 0.3% was a postmortem histology and in 0.8% assessment was unknown.

Conclusions:

The data about mesothelioma included in the VCR could be considered solid due to the results obtained through the validation. The mesothelioma's malignancy it is evident, despite its low incidence, its mortality rate is high. The increasing trend observed is in agreement with those experts who estimate that the highest rate of incidence will be between the years 2020-2040.

Key messages:

- The data about mesothelioma recorded in the Valencian Region's Cancer Registry could be considered solid due to the results obtained through the validation of information procedure.
- The increasing trend of malignant mesothelioma observed is in agreement with those experts who estimate that the highest rate of incidence will be between the years 2020-2040.

Impact of the Govan SHIP case management project on emergency hospital admission and GP interactions

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Background:

The Social and Health Integration Partnership (SHIP) project was implemented in Govan, a deprived area in Glasgow in 2015. This involved multidisciplinary teams, including GPs and social workers, identifying and supporting vulnerable patients at risk of attending A&E and GP surgeries. This study measures the impact of SHIP on A&E presentations and GP interactions.

Methods:

Rate of A&E presentations per 1000 population in 3 participating GP practices in Govan was compared before and after onset of the service, using segmented linear regression with 9-month pre- and 36-month post- intervention periods. Rates of GP interactions were also compared, using 21-month pre- and 36-month post- intervention periods. Rates of A&E presentations and GP interactions for practice population in Drumchapel- an area with similar rates of deprivation - were used as a control. Models included autoregressive and moving average terms, and a fourier term to adjust for seasonality.

Results:

Govan had a lower rate of A&E presentations than Drumchapel. A&E presentations did not change significantly over time prior to SHIP in either area. At April 2015, SHIP onset, a level change of -4.34 (-7.44, -1.24) A&E presentations per 1000 was observed in both areas, however , onset of SHIP was not associated with a reduction in level or trend in A&E presentations. Rate of interactions with GP was greater in Govan than Drumchapel prior to SHIP, increasing over time in both areas. After SHIP implementation there was a significant level change of 33.78 (19.57, 47.99) per 1000 across both areas. GP interactions in Govan however saw a further reduction of -1.48 (-2.87, -0.09) per 1000 per month. This is equivalent to SHIP being associated with an absolute reduction of 37 GP interactions per thousand and a relative reduction of 7.2% by March 2018.

Conclusions:

The Govan SHIP initiative was associated with no significant change in A&E presentations and some small reduction in GP interactions.

Key messages:

- The Govan SHIP initiative was associated with no significant change in A&E presentations and a small significant reduction in GP interactions.
- A cost effectiveness analysis of the project is recommended, given the relatively small benefits observed.

Bringing greater transparency to health workforce planning in Tajikistan: using the WISN approach

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Background:

For many countries, overcoming problems related to human resources is critical for progress towards Universal Health Coverage. Planning the workforce means to make decisions on required number, qualification and distribution of health workers. In Tajikistan, despite significant reforms, the health workforce is unequally distributed with physicians being mainly specialized and concentrated in urban areas.

Description:

Using the Tajik case, we present a first comprehensive assessment of the Primary Health Care (PHC) staffing situation in a Central Asian setting applying and critically discussing the Workload Indicators of Staffing Need (WISN) method developed by the World Health Organization. Staffing requirements were derived using annual service statistics, obtained from a re-count of monthly routine data from registration books at facility level in the year 2016. Available health cadres in PHC at district and facility level were compared to the according staffing needs. Sensitivity analysis was performed to test the robustness of the predictions, and to identify the main contributors to uncertainty in the predicted staff requirements.

Results:

For doctors performing general tasks in the PHC, there is currently an excess of full time equivalents. Moreover, health centres are overstaffed in terms of nurse positions. If the various speciality doctors currently working at rural health centres are not included, there is a shortage of family doctors in place. Sensitivity analysis revealed that staffing requirements in the PHC sector in Tajikistan are most importantly influenced by antenatal care visits.

Lessons:

The present study concludes that there is an oversupply of doctors and nurses at PHC and a shortage of family doctors working at the level of health centres. Consequently, a more rational health workforce planning based on well-grounded methodology such as WISN has potential to contribute to more efficient and effective health service delivery in Tajikistan.

Key messages:

- Countries shifting towards a family medicine model face challenges like an oversupply of specialists performing general medical tasks and a lack of general/family doctors in the transition phase.
- To identify staffing requirements a transparent and reproducible approach, such as the WISN methodology, is required to steer future staffing needs and possible re-training of current staff.

8.H. Hospitals, public health and safety

Measuring organizational performance. A review of the dimensions of hospital performance indicators

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Patients' increasing needs and expectations demand for an overall assessment of hospital performances. Several Agencies described sets of performance indicators and there is not a unanimous classification. The ImpactHTA Horizon2020 Project wants to address this aspect, developing a toolkit of key indicators to measure hospital organizational performance. The aim of this review is to identify the dimensions of quality in which hospital performance indicators are grouped, and to assess if there has been an evolution over time of the above-mentioned dimensions.

Following the PRISMA statement, PubMed, Ovid and Web of Science databases were queried to perform an umbrella review. Articles focusing on secondary care settings, published January 2000-May 2018 were considered. The study design included was systematic review.

3680 records were screened and 6 systematic reviews ranging 2002-2014 were included. The following dimensions were described in at least 50% of the studies: 6 studies classified efficiency (53 indicators analyzed); 5 studies classified effectiveness (12 indicators), patient centeredness (10 indicators) and safety (8 indicators); 3 studies responsive governance (2 indicators), staff orientation (8 indicators) and timeliness (4 indicators). 3 reviews did not specify the indicators related to the dimensions listed, 1 gave a complete definition of the meaning of each dimension and related indicators.

The research shows steady awareness of the importance of patient centeredness, effectiveness, efficiency, and safety dimensions; apparently, there is still not much attention to sustainability, appropriateness and accessibility in terms of indicators measuring, although those dimensions are described in one of the latest review. Another review described a new dimension, resources and capacity, which focuses on the availability of new technologies, underlining the growing importance of the adoption of digitalization in healthcare.

Key messages:

- Main dimensions of performance indicators: efficiency, effectiveness, patient centeredness, safety.
- More emphasis to sustainability and appropriateness to align with today's healthcare challenges.

Healthcare costs and outcomes: a value-based assessment tool for Clinical Governance

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Issue/problem:

Health systems sustainability is a critical public health issue. A value-based approach is essential to improve patient-centeredness, appropriateness, quality and funding allocation in healthcare.

Description of the problem:

This project was aimed to develop an innovative transferable tool to assess value-based activities in Hospital by monitoring care pathways costs and outcomes. Main questions were to: assess cost and outcome variance in homogeneous groups of patients; evaluate clinical activities contribution to the hospital budget; identify and monitor critical points. In 2018 a Business Intelligence system fed by different Hospital datasets was developed and tested in a Teaching Hospital in Rome to quantify and integrate data on pathways efficacy and costs. It was based on an algorithm of 20 indicators related to Women and Child Care Pathways.

Results:

Preliminary results showed a great variance for the same intervention/procedure concerning length of stay (3-8 days), waiting times (1-4 days), innovative technologies costs (2000-6000€) and obsolete reimbursement rates (2000-5000€) that do not guarantee adequate economic contribution margins. Improvement actions were defined concerning pathways' workflow and organizational appropriateness. The need for negotiations with Ministry of Health was highlighted, aimed to update reimbursement rates.

Lessons:

The tool, built on a value-based process view, allowed analyzing online outcomes and costs data aggregated by path, benchmarking results, identifying critical issues and providing improvement solutions. It turned out to be an innovative methodology - also applicable in other settings/countries - to trigger changes in health management and pursue quality and efficiency in healthcare.

Key messages:

- Value-based healthcare is the new public health paradigm.
- Assessing simultaneously Hospital costs and outcomes is a valuable way to derive overall healthcare value, improve quality and rationalize resources allocation.

Development of the Austrian version of the Hospital Survey on Patient Safety Culture

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Background:

Patient safety culture in hospitals (PSC), as well as its measurement and development, have received plenty of attention in Europe in recent years. Several instruments have been developed for its measurement in European countries. As Austria does not have empirically reviewed questionnaires to measure PSC jet, the research question of this study was: Is the globally admitted American questionnaire "Hospital Survey on Patient Safety Culture (HSOPSC)" (Sorra & Nieva, 2004) suitable for the healthcare system in Austria?

Methods:

The HSOPSC contains 42 questions, which constituted twelve factors altogether. The pre-test was done with 101 health professionals. The online survey was conducted in ten public hospitals in 2017. Overall 1525 health professionals participated, which corresponded to a response rate of 23%. A new instrument, namely "Hospital Survey on Patient Safety Culture in Austria (HSPSC-AUT)", was developed using the Exploratory Factor Analysis (EFA) and the Confirmatory Analysis (CFA).

Results:

The factor structure of HSOPSC was not identical to the factor structure of HSPSC-AUT, developed in our study. The study showcased a new tool, HSPSC-AUT, with 30 items altogether, consisting of seven departmental factors, two hospital factors and one outcome factor. This new tool (HSPSC-AUT) showed pleasant results on the model, indicator, and construct level. The results of CFA for HSPSC-AUT ($\chi2$ [360] = 1408.245, p = 0.0001) showed a better model compared to HSOPSC. The absolute and relative fit-indices showed excellent model adjustment (RMSEA = 0.049, SRMR = 0.041, GFI = 0.927, CFI = 0.941, TLI = 0.929).

Conclusions:

The study presents a new instrument, HSPSC-AUT, for the measurement of PSC. According to the results, HSPSC-AUT (10-factor structure) has a better model fit than the original HSOPSC. This was confirmed by chi-square test, absolute and relative fit-indices, informational criteria, reliability, and construct validity.

Key messages:

- The development of an instrument for measuring safety culture is the first step leading to a better PSC. For this reason, HSPSC-AUT is recommended as an instrument to measure the PSC in Austria.
- Finally, it can be said that the development of a new questionnaire as well as the related measurements of validity and reliability have added value to science and practice.

Patient safety incidents in ambulatory care in Germany

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Background:

In contrast to the inpatient sector, reliable data on the epidemiology and public health impact of patient safety incidents (PSI) are hardly found in the outpatient sector. Thus, this study focusses on the incidence of PSI; the distribution among the various specialist groups; the harmful consequences; the causes and how affected patients deal with PSI in Germany.

Methods:

We conducted a cross-sectional study using a newly developed computer-assisted-telephone-interview survey tool. Based on random telephone numbers, citizens >39 years were asked to report whether they had experienced a PSI in the last year or since their 40th birthday; whereby the PSI happened, what consequences the PSI had for them and if they reported the PSI back to their physician. We performed descriptive and multivariate analyses and extrapolated the results to the total population >39 years in Germany.

Results:

10037 citizens were surveyed (response rate 13%): 8841 had an outpatient visit last year, of whom 1570 (18%) had experienced at least one PSI. In total, 2832 PSI were reported. General practitioners caused 43% of PSI. Among specialists (54%), most PSI were found among orthopedists (15%) and internists (9%) and arose in connection with anamnesis and clinical examination (61%) as well as drug prescriptions (15%). 72% of the PSI caused health related harm. The most frequent harm was a deterioration in health (23%) and persistent pain (22%). 54% of those affected described the harm as severe or very severe. 27% considered doctors' stress and lack of time or poor communication (18%) as causes for PSI. 32% of PSI were reported back to the treating physician.

Discussion:

Extrapolated to the total population >39 years in Germany (47.2 million), an incidence of 12 million PSI per year must be expected with around 6.6 million affected outpatients. Thus, PSI in the outpatient sector are of immense public health importance in Germany.

Key messages:

- Patient safety incidents (PSI) often happen in the German outpatient sector.
- Outpatient PSI can also be accompanied by severe harm for patients.

The Bundle approach to reduce SSI rate of colon surgery, Piedmont (Italy): experience of 2012-2017

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Background:

According to ECDC, Surgical Site Infections (SSI) are the second most frequent type of Healthcare Associated Infections (HAI) in Europe and in USA, and 9.5% of colon surgical procedures develop SSI. SSIs are associated with prolonged hospital stay, higher costs burden and higher attributable morbidity and mortality. Interventional programs can reduce the risk of SSI. Care bundles are a complex of EBM-based interventions on a specific population and setting, in order to improve clinical outcomes. A bundle is successful only if all its items are properly applied, through the 'all-or-none' method. Application of a bundle does not exclude other good clinical practices.

Methods:

Data from 37 hospitals participating in the Regional SSI surveillance of Piedmont (Italy) were collected from 2012 to 2017. In hospitals applying the bundle, 4 bundle items had to be used in all the procedures: Temperature control, pre-operative shower, trichotomy, antimicrobial prophylaxis. 6909 patients undergoing colon surgery were followed for 30 post-operative days to detect SSI events (According to ECDC 2016 Protocol). For some procedures, compliance to Bundle item application was ≤ 75%.

Results:

6909 procedures were assessed: 3631 with no bundle application and 3278 with bundle application; in particular 974 were compliant to all bundle items (100%), while 2304 were compliant to 3 items or less (≤ 75%). We report a SSI risk of 11.20% for surgical procedures performed without bundle application; this risk decreases to 5.63% (OR: 0.49, 95% CI: 0,36-0,67; $p < 0.001$) when compliance to bundle is 100%. When compliance to bundle is ≤ 75% instead of 100%, SSI risk raises to 8.47% (OR: 1.49, 95% CI: 1.07-2.04; $p = 0.002$).

Conclusions:

Care bundle, if properly applied, is associated to statistically significant reduction of SSI rate (51%) for colon surgical procedures. Bundle programs should be encouraged and improved in hospitals to reduce healthcare costs and burden of HAIs.

Key messages:

- The use of the 4-item Surgical Care Bundle is associated to statistically significant reduction (51%) of SSI rate for colon surgical procedures.
- Surgical Care Bundle programs should be recommended and improved in every hospital to reduce healthcare costs and burden of HAIs.

Acute respiratory infection hospitalized in intensive care unit: long-term outcome in Elderly

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Background:

The consequences of the ageing population concerning ICU-hospitalization need to be adequately described, especially acute respiratory infections (ARI) strongly associated with Elderly. The study aimed to assess the long-term outcomes of ARI surviving ICU hospitalization in patients over 80 yo.

Methods:

A retrospective multicentre cohort study was performed, based on hospital discharge databases in one French region (2.5 million inhabitants). Patients with ARI in ICU were selected according to specific ICD-10 diagnosis codes recorded and matched with a control population (patient undergoing a cataract surgery), using a propensity score (matching algorithm 1:1 ratio, caliper 0.002) with the matching variables (age, sex, frailty score, chronic heart disease, chronic pulmonary disease and cancer). Analyzes of this matched population were performed to determine their 2-year in-hospital mortality, healthcare utilization and evolution of the frailty score during the 2-year period before/after the inclusion stay.

Results:

A total of 1,658 hospital stays for ARI after 80 yo were identified, with 438 dead (26%) during the initial stay. After matching with the cataract population, 988 patients were selected in each group without difference in the propensity score. ARI lead to an important increase of healthcare use during the 2 years after discharge. The patients that were discharged from hospital after ARI requiring ICU, had a 23-fold increase of death at 90 days and 4-fold at 2 years and the evolution of the frailty score was 1.6 fold higher than the cataract population.

Conclusions:

Elderly patients with severe ARI survived from their ICU stay in 75%, but have a major risk of death in the following months, and an important increase in healthcare consumption. Our findings provide data for more informed goals-of-care discussions and may help target post-ICU discharge services for these high-risk groups.

Key messages:

- Elderly patients with severe acute respiratory infection survived ICU in 75%, but had a major risk of death in the following months, added to a substantial increase in healthcare consumption.
- These findings provide data for more informed goals-of-care discussions and may help target interventions for these high-risk groups.

Obstetric interventions among native and migrant women: a survey of episiotomy in Portugal

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Introduction:

It is unclear whether migrant women experience worse pregnancy outcomes than native women. A better comprehension of obstetric care provision, including controversial interventions such as episiotomy, is important to improve equity of service provision, overall maternal and neonatal health and to support evidence-informed perinatal health policy-making. We aimed to determine if migrant and native women giving birth vaginally have different risks of episiotomy and if the risk differs by migrant sub-groups.

Methods:

This study is based on a cross-sectional survey of foreign-born women with a random sample of native women, implemented in 32 public maternity units in mainland Portugal. We included 3583 women with vaginal delivery. Migrant status was defined by the woman's country of birth (migrants, born abroad, vs natives, born in Portugal), then as subgroups of migrants from Brasil, Portuguese-speaking African countries (PSAC) and non Portuguese-speaking countries vs natives. The association between migrant status and episiotomy was assessed using multilevel logistic regression models, stratified by delivery mode, and adjusted for main risk factors of episiotomy.

Results:

The overall frequencies of episiotomy were 52.6% and 48.2% among the 1707 natives and the 1876 migrants, respectively (p = 0.01). With spontaneous delivery, migrant women had decreased odds of having an episiotomy (adjusted OR 0.70 [95% CI 0.58-0.83]), especially those from PSAC (aOR 0.57 [0.46-0.71]). However, with instrumental delivery, migrant women had increased odds of episiotomy (aOR 2.47 [95% CI 1.50-4.07]), especially those from Brasil (aOR 3.24 [1.18-8.92]) and non Portuguese-speaking countries (aOR 3.75 [1.82-7.71]).

Conclusions:

These results suggest non-medically justified differential care during childbirth and highlight the importance of developing evidence-based recommendations for episiotomy use, in a country with a high frequency of medical intervention during delivery.

Key messages:

- Portugal displays a high frequency of medical interventions during delivery, including episiotomy, highlighting the need for developing evidence-based recommendations.
- Migrant and native women have different risks of episiotomy, suggesting non-medically justified differential care.

Caesarean section and neonatal outcomes among women of migrant origin in Finland

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Background:

In Finland, limited information is available on neonatal disparities among migrant origin women. We investigated differences in caesarean section and neonatal outcomes between migrant and Finnish origin women in Finland.

Methods:

National data from the Medical Birth Register of Finland included information on the most recent singleton birth of all women (n = 382 233) between January 2004 and December 2014. We categorized women into nine regional categories based on their country of origin by linked population data from Statistics Finland. Women with Finnish origin were used as a reference group. Our main statistical method was logistic regression analyses adjusted for age, socio-economic status, pre-pregnancy body mass index, gestational age, parity, marital status, smoking during pregnancy, and ponderal index.

Results:

Compared with Finnish women, Sub-Saharan African women had higher odds for caesarean sections OR 2.14 (95% CI 1.96, 2.33), preterm births OR 1.22 (95% CI 1.0, 1.43), low 5 minutes Apgar score OR 3.73 (95% CI 3.09, 4.49), and intensive care unit care OR 1.39 (95% CI 1.24, 1.56) for newborns. South Asian and East Asian women were at increased risk for caesarean births OR 1.52 (95% CI 1.36, 1.71) and OR 1.19 (95% CI 1.10, 1.28) respectively, preterm birth OR 1.46 (95% CI 1.20, 1.77), and OR 1.28 (95% CI 1.13, 1.46) and low 5 minutes Apgar score OR 2.06 (95% CI 1.55, 2.76), and OR 1.36 (95% CI 1.11, 1.67) compared with Finnish women. Middle Eastern and Latin America/Caribbean women had higher odds for caesarean births OR 1.13 (95% CI 1.02, 1.24), and OR 1.66 (95% CI 1.39, 1.97) respectively and low 5 minutes Apgar score OR 1.69 (95% CI 1.34, 2.14) and OR 2.12, (95% CI 1.37, 3.26) compared with Finnish women.

Conclusions:

Groups of women with higher risk for caesarean section and poor neonatal outcomes were identified and they may need more attention in maternal and child health services.

Key messages:

- Women from Sub-Saharan African, East Asian and South Asian origin had an elevated risk for most of the poor obstetric outcomes compared with Finnish women.
- Women from East Asian and Russian/former USSR countries had lower risk for caesarean section and newborns care in intensive care unit compared with Finnish women.

8.I. Improving vaccine confidence: actions and outcomes

Misconceptions and lack of vaccine confidence: even First Responders are not spared

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Introduction:

First Responders (FR) are front-line healthcare workers potentially exposed to different infectious agents. Characterizing their knowledge, attitudes and practices

(KAP) towards immunizations has therefore the potential to significantly improve occupational health and safety.

Methods:

A questionnaire-based cross-sectional study was performed during October 2018, collecting a convenience sample among FR from the Parma Province. Participants were inquired on 3 recommended vaccinations (i.e. seasonal influenza vaccine, SIV; measles vaccine, MeV; pertussis vaccine, Pa) and for meningococcal vaccines (MEN, not officially recommended in FR). Knowledge status (KS) and Risk Perception (RP) were assessed as percent values. Multivariate odds ratios (mOR) for factors associated with vaccination status were calculated by means of a binary logistic regression analysis.

Results:

A total of 161 questionnaires were retrieved (mean age 45.1±14.1 years; seniority 10.8 ± 8.6 years). Internal consistency was good (Cronbach's alpha = 0.894). KS was unsatisfying (46.5% ± 32.4) with uncertainties on the recommendations for MeV and MEN (39.1% and 34.2% incorrect answers). The majority of respondents were favorable towards MEN (89.4%), MeV (87.5%), Pa (83.0%), while 55.3% exhibited a favorable attitude for SIV, and 28.0% had received SIV 2018 (self-reported lifetime status for MEN 26.1%, MeV 42.2%, Pa 34.8%). RP was unsatisfying, particularly for SIV (33.9% ± 18.4). Interestingly enough, neither KS nor RP were associated with vaccination rates, being the main predictor for SIV 2018 a seniority ≥ 10 years (mOR 3.26, 95%CI 1.35-7.91), and higher educational achievements for both Pa (mOR 3.27, 95%CI 1.29-8.30) and MeV (mOR 2.69, 95%CI 1.09-6.65).

Conclusions:

Reasons for vaccination gaps in FR apparently do not find their roots only in FRs' incomplete KS or RP. However, the very low vaccination rates for SIV, MeV and Pa recommends stronger and more appropriate information campaigns.

Key messages:

- Main drivers of vaccination status in First Responders are not solely their knowledge status or risk perception.
- Achieving better vaccination rates in First Responders requires the understanding of a complex interplay of individual factors.

Compulsory vaccination policies: a systematic review about knowledge, attitudes and believes

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Background:

Vaccine hesitancy is a considerable issue in European Countries and leads to low coverage rates. Consequently, the implementation of national immunization programmes including the introduction of compulsory vaccination are required. It is interesting to determine citizens' knowledge, attitudes and believes about vaccination policies, in order to more effectively define vaccination programs.

Methods:

The present study systematically reviewed published studies evaluating attitudes towards mandatory vaccination programs. PubMed and Scopus scientific databases were searched and 4,198 results were returned, of these 29 met the inclusion criteria. PRISMA statements were followed.

Results:

Twenty-two studies assessed attitudes towards mandatory vaccination programs in general, while 9 papers focused specifically on the Human Papilloma Virus (HPV) vaccine. Most of the studies were performed in Europe and North America. According to the assessed studies, the majority of the population seems to be in favour of compulsory vaccinations, from 53% to 97% for different vaccination programs. More resistance has been recorded for the HPV vaccination: the percentage of agreement for mandatory HPV vaccinations ranged from 27% to 63.5%. Furthermore, some studies investigated healthcare workers' attitudes towards childhood and adult vaccinations. They pointed out that the general population is generally more in favour of mandatory vaccination policies than healthcare workers. The studies highlighted that the support to mandatory policies increased after their implementations.

Conclusions:

The results presented in this review could be an important starting point to further understand the issue of vaccine hesitancy and support the implementation of effective vaccination strategies in Europe.

Key messages:

- Mandatory vaccination policies are generally well accepted among general population.
- More resistance is recorded for specific vaccination (HPV) or among specific population (healthcare workers).

Opinions and beliefs in vaccine hesitant parents in Italy: what makes the difference

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Vaccine hesitancy has been defined as the delay of acceptance or refusal of vaccines. Hesitant parents' (HP) fluctuate between anti-vaccine (AP) and pro-vaccine parents' (PP) positions. In the light of alarming results from recent Eurobarometer 488, our aim was to identify sensitive topics harbouring the widest opinion gap between HP and PP.

In 2017, an online questionnaire was administered to parents with children aged 3-84 months. Parents were classified as PP, HP or AP based on self-reported vaccine status and timeliness of vaccinations. Agreement with 25 items was assessed with 5-point Likert scale. Items were combined into 8 topics (benefit/risk of vaccines, trust/mistrust in healthcare workers, administration policies, complacency, sense of community, freedom of choice) and scores calculated. Internal consistency was evaluated with Cronbach's α; t-tests (sig. <.05) were used (Norman G, 2018).

The study included 3,865 parents (64% PP; 32% HP; 4% AP). Cronbach's α ranged 0.77-0.92. The widest gap concerned the sense of community: HP (2.7/5.0) cared significantly less than PP (4.7) about the usefulness of vaccine in protecting other children and claimed for a complete freedom in decision to vaccinate (3.6) more than PP (1.8). HP were worried (4.1) about current vaccination schedule (PP 2.1): simultaneous administration and age at vaccination (considered too young) were matter of concern. Among HP, mistrust of healthcare workers (3.7) and fear of side effects (3.8) played an important role, but the gap with PP was narrower compared with abovementioned topics; awareness in vaccine benefits reached 3.7. Agreement with complacent attitudes was low (2.2) with the least difference with PP (1.2).

HP showed to partially consider benefits of vaccines on a community scale, claiming for a private nature of this choice. The existence of a consistent opinion gap about the vaccination schedule may suggest the need for a sharper focus on current communication tools and strategies.

Key messages:

- While hesitant parents share some concerns with pro-vaccine, relevant opinion gaps may serve as warning lights, pointing at topics potentially harbouring the most sensitive drivers of hesitancy.
- Communication strategies should primarily focus on raising acquaintance of hesitant parents with benefits arising from herd immunity and compliance with the suggested vaccination schedule.

Knowledge, false myths and beliefs on vaccines among pregnant women: results from NAVIDAD study

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Background:

The diffusion of false myths and vaccine hesitancy are alarming phenomena in European countries and leads to decreasing trends in infant vaccine coverages. Aim of the study was to analyse the level of confidence and correct awareness about immunization, which are crucial for the success of vaccination programs.

Methods:

As part of the NAVIDAD multicentre study, we examined vaccination confidence and complacency, among a sample of 1820 pregnant women from 14 Italian cities. The questionnaire assessed the interviewee's knowledge, beliefs and misconceptions, as well as their socioeconomic status, sources of information about vaccines and confidence in the Italian National Healthcare Service.

Results:

Of the participants, only 9% of women completely believed to efficacy, necessity and safety of vaccinations. Almost 20% of them had misconceptions on the majority of the themes. There was a significant difference in level of knowledge considering educational level: women with a high educational level have less probability to obtain a low knowledge score (OR 0.43 [95%CI 0.34-0.54]). The level of knowledge was influenced also by the sources of information: women who got information from General Practitioner and from Institutional Web sites have significantly less chance to have misconceptions (OR 0.74 [95%CI 0.58-0.96]; OR 0.59 [95%CI 0.46-0.74]). Finally, results underlined the influence of trust in healthcare professional information on likelihood of having misconceptions (OR 0.49 [95%CI 0.27-0.89]).

Conclusions:

Data suggest the efficacy of healthcare professionals and Institutional Web sites as source of information to contrast misconceptions and underline the importance of confidence in the healthcare system to increase complacency and confidence on vaccines.

Key messages:

- There is a general lack of knowledge about vaccinations among future mothers. Most of misconceptions regarding vaccinations are related to their safety: this could affect confidence and complacency.
- To increase vaccine confidence, there is a strong need to inform future mothers: our data show the importance and efficacy of Health Professionals and Institutional Web sites as information sources.

The use of ICT to increase vaccination uptake: state of the evidence from experimental studies

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Background:

Information and communication technology has a great potential to improve vaccine uptake by increasing the demand of vaccines and the supply of life-course immunization services. The EUVIS (EUrope Vaccines ICT Strategies) project aims at assessing the current use of ICT in European countries' immunization programs to inform the planning and implementation of ICT-based intervention models to increase vaccine uptake. Here we present the output of Part I of the EUVIS Project, the state of the evidence from experimental studies at the global and regional level.

Methods:

We conducted a systematic review following the PRISMA guidelines to analyze the available evidence from experimental studies on the impact of ICT-based interventions to improve: i) vaccine uptake (primary outcome), and other associated outcomes, including knowledge and attitudes towards immunization in infants, adolescents, adults, elder populations and at risk groups.

Results:

We included 68 RCTs. Informative websites significantly increased vaccination uptake among adolescents. Among young adults, none of the assessed interventions was successful in increasing vaccination uptake. The tools targeting parents that increased uptake were SMS, automated phone calls or messages, websites and online decision aid platforms. For pregnant women, combinations of more types of ICT were more effective in increasing uptake. In the adult population, both SMS and videos proved to be successful, while in elder populations and at-risk groups, the use of more traditional methods as short phone calls proved to be more efficient than ICTs.

Conclusions:

Technological innovations have made significant contributions to healthcare, but our results shows that the interventions must be tailored to target populations' specific characteristics and needs. These data are of crucial importance to identify which ICT-based interventions are more effective in each target group, to plan and implement immunization programs.

Key messages:

- Information and Communication Technology-based interventions to increase vaccine uptake are more successful when planned tailoring target populations' specific characteristics and needs.
- ICT can significantly improve healthcare delivery but its role to increase vaccine uptake is controversial. Results from this systematic review are fundamental to plan tailored ICT-based interventions.

Flu vaccination coverage in a large Italian teaching hospital: the example of the leaders

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Annual flu vaccination among healthcare workers (HCWs) is recommended to prevent influenza and to avoid its transmission especially to frail patients. In our teaching hospital, flu vaccination rate among HCWs has been growing during last 3 years. The aim of this study was therefore to describe the flu vaccination coverage across the past 3 years and to analyze which factors lead to such increase. We performed a cross-sectional study on all HCWs of Fondazione Policlinico Universitario ''A. Gemelli'' (FPG) hospital of Rome (Italy) to determine the flu vaccination coverage. Socio-demographic and occupational data were collected from hospital personnel records and included age, gender, previous flu vaccination, profession and workplace unit. On site vaccination plus academic detailing involving leaders have been the main strategies adopted in this last 3 years that have already proved to be effective in increasing vaccination coverage among HCWs. During the 2018-2019 season, we analyzed how the flu vaccination coverage among leaders (nurse coordinators and head physicians) could affect all HCWs coverage rate. Flu vaccination rate increased from 9.57% in the 2016-17 to 14.24% in the 2017-18 and to 22.38% in 2018-2019. A total of 4035 HCWs employed in the FPG were included in 2018-19. Concerning the role played by vaccination of leaders in increasing general vaccination coverage during the 2018-2019, the group of HCWs with a vaccinated leader showed a higher coverage rate (28.65%) than the group with a non-vaccinated leader (16.22%) ($p < 0.0001$). The results are preliminary. Flu vaccination coverage of HCWs in our hospital during the last 3 years has been increasingly higher. Vaccination of the leaders, in addition to previously implemented effective strategies, resulted to be a key factor in increasing flu vaccination coverage among all HCWs. Socio-demographic and occupational variables can significantly influence the coverage rate as well.

Key messages:

- Annual flu vaccination among healthcare workers (HCWs) is recommended to prevent influenza and to avoid its transmission especially to frail patients.
- This study shows the growing flu vaccination coverage rate in our teaching hospital and the effectiveness of the example given by the vaccinated leaders in increasing the coverage among all HCWs.

Vaccination apps: a missing opportunity from various perspectives?

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Introduction:

Apps for vaccination are rarely a topic in scientific literature, despite the growth of interest in mobile applications about physical exercise, food intake and even chronic diseases management. Since 2014 WHO is wishing and technically supporting the development of a pan-European vaccination app to overcome the trending vaccine hesitancy, and instituted this year a Department of Digital Health. This research aims to evaluate apps for general population, and parents in particular.

Methods:

We looked for apps from Google Play Store, the official Android store, searching single words related to vaccination with an Italian IP address, then exporting results. The research provided 1086 univocal apps that underwent a selection based on title, marketplace description and website if available, and further classified by category and other variables.

Results:

The 117 selected apps were downloaded 15 million times in total. The most common category is vaccination reminder and recorder (41% of apps with 2.4 mln downloads - DL), alone or as a part of a broad health manager, mostly designed for parents. The second one is medical education apps (35%, 343k DL) most of which in English and designed for healthcare professionals, then games (10.3% of apps but the most downloaded with 12 mln DL), appointment makers (7.7%, 122k DL) powered by Regional Healthcare Service, and vaccination travel managers (6%, 13k DL). Only 26.5% provided both description and app content in Italian.

Conclusions:

While literature states reminding apps may be a helpful resource to ease the completion of vaccinal duty, the n° of downloads shows a lack of interest or expose flaws in their features (e.g. absence of translation). This study also displays offer fragmentation regarding these new technological opportunities to raise vaccination awareness among peoples: neither a single Italian app is provided by the Ministry, nor a pan-European app by E.U., making WHO's wishes even more actual today.

Key messages:

- Vaccination reminder apps are a helpful but under-utilized tool for parents, maybe due to offer fragmentation, lack of translation and need of country adaptations.
- The creation of a centralized information service for mobile users is a challenge for European Digital Health in times of trending vaccine hesitancy.

An innovative continuing medical education approach of general practitioners on vaccination: ForMéVac

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Background:

General practitioners (GPs) play a central role in vaccinating the population in France. In a context of mistrust regarding vaccination, and because patients increasingly question their GP about vaccines, we designed the continuing medical education (CME) module in order to 1) reinforce GPs knowledge about vaccination 2) help GPs answer questions most frequently asked by their patients and 3) evaluate the impact of this module on their vaccine prescriptions.

Methods:

The CME module lasted 3 hours and focused on MMR, meningitis C and seasonal influenza vaccines; GPs were given confidential feedback information on percentages of their patients vaccinated. We included GPs practicing in Southeastern France and with less than 60% of their child patients (aged between 10 and 34 months) with 2 reimbursements of MMR vaccines (data obtained from the Health Insurance Fund). Eligible GPs were then randomly assigned to three groups: those offered either a face-to-face or e-learning CME module and a control group without CME. We used vaccine reimbursement rates for MMR 2-doses, Meningitis C, seasonal influenza as proxies for vaccine prescription rates, and a difference in differences approach to compare reimbursement rates in the year before the CME session and in the 24 months post-intervention.

Results:

Compared to the control group, vaccine reimbursement rates for 2-dose MMR and meningitis C increased by 6% and 4% respectively ($p < 0.05$) among patients of GPs who participated in the face-to-face CME session (52 GPs, with 1 842 children). For seasonal influenza vaccine, we found a 12% increase in the face-to-face group ($p < 0.01$). We found no statistically significant increase in the e-learning group (19 GPs, with 674 children) whatever the vaccine.

Conclusions:

We found a modest impact of face-to-face CME session with feedback on GPs practices for childhood vaccines and a stronger one for seasonal influenza.

Key messages:

- The very positive feedback from face-to-face training highlights the fact that this type of training, which bring knowledge on vaccination in general and specific vaccines to GPs, is necessary.
- We found weak evidence for efficiency of CME sessions associated with audit/feedback to modify GPs practices regarding MMR and meningitis C vaccines.

8.K. Determinants of mental health

Income-related inequalities in mental health in Sweden and the role of social determinants

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Background:

Mental health is an increasing concern in all European countries as the burden of mental disorders continue to grow and cause substantial suffering and costs to societies. Furthermore, research shows there are social inequalities in the distribution of mental illness. This study aims to increase knowledge on income-related inequalities in mental health in Sweden and the role of social determinants.

Methods:

Drawing on a national survey (Health on Equal Terms) representative of the population aged 16-84, years 2010-2015 (n = 57107) we quantify the income-related inequality in mental health and estimate the contribution of social determinants of the inequality. Poor mental health is defined as a value of at least 3, based on the general health questionnaire (GHQ)-12. Income is measured as yearly disposable income. Income related inequalities in mental health are quantified by the concentration index and decomposed using the Wagstaff-type decomposition analysis.

Results:

Preliminary results show that the income inequalities in mental health, as measured by the overall concentration index in mental health was - 0,16 (95% CI -0.17 to -0.15), indicating income inequalities to the disadvantage of those less affluent. The determinants that contributed most to the inequalities were employment, financial strain and experiencing harassment. Together they explained 43 % of the income inequalities in mental health. Generally, socio-economic factors had highest importance for the inequalities found, while demographic factors and psychosocial factors were of smaller importance.

Conclusions:

The income related inequalities in mental health are substantial in Sweden. Recently, a national target of reducing the preventable inequalities in health within a generation was adopted. To improve surveillance of inequalities and inform policy we need to closely follow the development of inequalities in mental health and to disentangle the contribution of specific social determinants.

Key messages:

- Income-related inequalities in mental health in Sweden are considerable.
- Socio-economic factors had highest importance for the inequalities found, while demographic factors and psychosocial factors were of smaller importance.

Child living arrangements following separation and mental health of parents in Sweden

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Background:

Father involvement and joint physical custody in post-separation families have become increasingly common. In Sweden, 35 percent of the children of separated parents live equally much with both parents. The associations between child living arrangement and parental health may vary between women and men. This study analyzes the association between children's living arrangement and mental health of parents, and how this interacts with material and social circumstances.

Methods:

Drawing on The Swedish Survey of Living Conditions (ULF) 2008-2013, the association between child living arrangements and mental health (worry/anxiety) of parents in four family structures: nuclear, reconstituted, single with joint physical custody, and single with main or sole custody, were analyzed. Data on 9,225 mothers and fathers with resident children aged 0-17 were analyzed by logistic regressions for average marginal effects adjusting for socio-demographic, socio-economic and social factors. Analyses of interaction effects were made using the synergy index.

Results:

Substantial family type differences were found in mental health between nuclear family and all other family types for mothers, and nuclear family and single parents for fathers. For the single mothers, the higher risk for worry and anxiety was reduced following controls for socioeconomic factors. Interaction effects were found for the combination of single motherhood and non-employment, causing a higher risk of mental health problems for single mothers, both with joint (SI 5.25 (2.06-13.39)) and sole custody (SI 1.70 (1.11-2.62)), than would be expected from a simple addition of these exposures, indicating that this is a vulnerable group.

Conclusions:

The results indicate that joint custody is associated with higher risk for worry and anxiety for the parents, especially for mothers, both re-partnered and single, but also for single fathers.

Key messages:

- Shared residence is associated with higher risk for worry and anxiety in parents.
- Single mothers lacking employment is a particularly vulnerable group.

The assessment of students anxiety and depression symptoms, sense of coherence and suicidal risk

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Background:

The study measures and compares the rates of anxiety, depression, sense of coherence, subjective health status, suicidal risk among students from 12 universities of Lithuania.

Methods:

Six-hundred-fifty-eight students from different academic fields completed a questionnaire that consisted of 23 questions and included Hospital Anxiety and Depression(HAD), Sence of Coherence(SOC-3) scales, suicide risk and subjective health status assessments. The data was analised by Microsoft Excel, R commander and IBM SPSS programmes.

Results:

Males had higher depression($p = 0,025$), but lower anxiety prevalence($p < 0,001$) than females. The total score of depression symptoms subscale (5,min = 0,max = 19) indicated no risk of depression, although a mild anxiety level was found (the total score is 10,min = 0,max = 21). Students scored 3 points out of 6 in SOC-3 and evaluated their health for 2 points out of 5. Weak suicide risk was found in 43,2%(n = 284) of all respondents, moderate - 12%(n = 79) and high - 3,2%(n = 21). Students from the field of arts had the highest depression rate(7), whereas those from social sciences had the lowest rate(3)($p < 0,001$). Students who live alone during years of study evaluated their health the worst($p = 0,004$), had higher risk of depression($p = 0,038$), more often felt sadness and apathy during the last 12 months($p = 0,045$).

Conclusions:

The respondents have mild anxiety symptoms, low sence of coherence, their subjective health status is good. More than half of students had suicidal thoughts. Male gender, academical field of arts, living alone during studies potentially increase the risk of depression, whereas female gender is related with higher anxiety symptoms. This study motivates the universities of Lithuania to strengthen the psychological support for students.

Key messages:

- The survey unveiled the need for higher education institutes to put more effort on reducing students‘ anxiety levels and it also highlighted the problem of suicide ideation among students.
- This study motivates the main universities of Lithuania to strengthen the psychological support for students.

Development of the guideline ‘Challenging behaviour in adults with intellectual disability’

Marieke Kroezen

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Background:

Challenging Behaviour (CB) is a common problem among people with intellectual disability (ID), leading to a lower quality of life and a negative impact on the emotional well-being of family, staff and fellow clients. Additionally, reduced access to community services and (avoidable) high consumption of specialist care has been reported. This presentation will offer information on the development and content of the Dutch multidisciplinary guideline ‘Challenging behaviour in adults with ID’ that will be published in 2019.

Methods:

The guideline was developed on the basis of the methodologic strategy of the AGREE II instrument. Two systematic reviews were conducted. Additionally, healthcare professionals were surveyed through an online questionnaire, interviews (n = 14) and focus groups (n = 6), and interviews were conducted with adults with ID (n = 20) and their family (n = 16). The draft guideline was reviewed by stakeholders and underwent a practice test.

Results:

The first module of the guideline describes the assessment of (1) the CB itself, (2) potential factors that contribute to the presence or continuation of CB, and (3) the context in which CB occurs. Implementation will lead to a comprehensive, integrated diagnosis and assessment of the CB, the person and context.

Module 2 enables health professionals to systematically and transparently select and apply interventions to resolve CB, whilst taking into account multiple factors as well as the specific context in which the CB occurs.

Module 3 provides the medical, legal and ethical framework for (off-label) prescription of psychotropics. It explains the process for starting and discontinuing (off-label) psychotropics, the selection of appropriate medication and dosages, and the monitoring and evaluation of effects and side-effects.

Conclusions:

The guideline is based on state of the art scientific and practice-based evidence and will contribute to a more structured approach in the care for people with ID and CB.

Key messages:

- Challenging behaviour is a common problem among people with intellectual disability and can have a negative impact on quality of life and the emotional well-being of family, staff and fellow clients.
- The development of the multidisciplinary guideline ‘Challenging behaviour in adults with ID’ can help to better understand and treat challenging behaviour in people with ID.

The impact of a national public awareness campaign on dementia knowledge and help-seeking in Ireland

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Background:

Dementia is a growing public health issue in Ireland primarily due to the ageing population. Increasing public knowledge of dementia has been identified as a key priority to reduce disease burden. This study evaluated the impact of a dementia communication campaign on dementia knowledge and help-seeking intention among the general public in Ireland.

Methods:

In 2016, a nationally-representative sample of over 1,200 adults in Ireland was surveyed to inform a nationwide dementia awareness campaign entitled Understand Together. Multiple factors were examined including sociodemographic characteristics, dementia advertising awareness, dementia knowledge and help-seeking intention. A similar survey (N = 1,003) was conducted in 2018 to evaluate public awareness of the campaign and its association with dementia knowledge and help-seeking intention. Data from the 2016 and 2018 surveys were analysed using univariable analysis and logistic regression, adjusted for sociodemographics.

Results:

Awareness of dementia advertising increased from 17% (2016) to 32% (2018) ($p < 0.001$). Women (OR 1.51, 95%CI 1.14-2.00), rural residents (OR 1.48, 95%CI 1.10-2.00), respondents aged 40-59 years (OR 1.96, 95%CI 1.40-2.74) or 60+ years (OR 2.18, 95%CI 1.47-3.22), and those who knew someone with dementia (OR 2.06, 95%CI 1.55-2.75) were more likely to be aware of the campaign. Very good or good dementia knowledge and awareness that dementia risk is modifiable increased from 24% to 33% ($p < 0.05$) and 46% to 52% ($p < 0.05$), respectively. There was a linear association between campaign awareness and both help-seeking (OR 1.81, 95%CI 1.36-2.40) and holding a positive view of the potential benefits of early diagnosis (OR 1.97, 95%CI 1.35-2.88).

Conclusions:

The ongoing campaign, as well as future communication strategies, should continue to focus on increasing awareness of modifiable risk to support prevention. Campaign messaging/modalities should be targeted at harder to reach population groups.

Key messages:

- Public communication on dementia can improve knowledge and help-seeking.
- Health communication campaign evaluation can identify, and inform the targeting of, hard to reach population groups.

8.L. Population health patterns

The decomposition of life expectancy for age and cause of death in Tuscany, Italy

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Introduction:

Changing of life expectancy at birth (LE) over time reflects variations of mortality rates of a certain population. Italy is amongst the countries with the highest LE, Tuscany ranks fifth at the national level. The aim of the present work was to evaluate the impact of various causes of death in different age groups on the change in LE in the Tuscany region (Italy) during period 1987-2015.

Material and methods:

Mortality data relative to residents that died during the period between 1987/1989 and 2013/2015 were provided by the Tuscan Regional Mortality Registry. The causes of death taken into consideration were cardiovascular (CVS), respiratory (RESP) and infective (INF) diseases and cancer (TUM). The decomposition of LE gain was realized with software Epidat, using the Pollard's method.

Results:

The overall LE gain during the period between two three-years periods was 6.7 years for males, with a major gain between 65-89, and 4.5 years for females, mainly improved between 75-89, <1 year for both sexes. The major gain (2.6 years) was attributable to the reduction of mortality for CVS, followed by TUM (1.76 in males and 0.83 in females) and RESP (0.4 in males; 0.1 in females). The major loss of years of LE was attributable to INF (-0.15 in females; -0.07 in males) and lung cancer in females (-0.13), for which the opposite result was observed for males (gain of 0.62 years of LE).

Conclusions:

During the study period (1987-2015) the gain in LE was major for males. To the reduction of mortality for CVS have contributed to the tempestuous treatment of acute CVS events and secondary CVS prevention. For TUM the result is attributable to the adherence of population to oncologic screening programmes. The excess of mortality for INF that lead to the loss of LE can be attributed to the passage from ICD-9 to ICD-10 in 2003 (higher sensibility of ICD-10) and to the diffusion of multi-drug resistant bacteria, which lead to elevated mortality in these years.

Key messages:

- The gain in LE during the period the 1987-2015 was higher in males.
- The major contribution to gain in LE was due to a reduction of mortality for CVS diseases.

Domain-specific physical activity patterns and cardiorespiratory fitness among adults in Germany

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Background:

Studies show that occupational physical activity (OPA) has less health-enhancing effects than leisure-time physical activity (LTPA). The spare data available suggests that OPA rarely includes aerobic PAs with little or no enhancing effects on cardiorespiratory fitness (CRF) as a possible explanation. This study aims to investigate the associations between patterns of OPA and LTPA and CRF among adults in Germany.

Methods:

1,204 men and 1,303 women (18-64 years), who participated in the German Health Interview and Examination Survey 2008-2011, completed a standardized sub-maximal cycle ergometer test to estimate maximal oxygen consumption (VO2max). Job positions were coded according to the level of physical effort to construct an occupational PA index and categorized as low vs. high OPA. LTPA was assessed via questionnaires and dichotomized in no vs. any LTPA participation. A combined LTPA/OPA variable was used (high OPA/ LTPA, low OPA/LTPA, high OPA/no LTPA, low OPA/no LTPA). Information on potential confounders was obtained via questionnaires (e.g., smoking and education) or physical measurements (e.g., waist circumference). Multi-variable logistic regression was used to analyze associations between OPA/LTPA patterns and VO2max.

Results:

Preliminary analyses showed that less-active men were more likely to have a low VO2max with odds ratios (ORs) of 0.80 for low OPA/LTPA, 1.84 for high OPA/no LTPA and 3.46 for low OPA/ no LTPA compared to high OPA/LTPA. The corresponding ORs for women were 1.11 for low OPA/LTPA, 3.99 for high OPA/no LTPA and 2.44 for low OPA/no LTPA, indicating the highest likelihood of low fitness for women working in physically demanding jobs and not engaging in LTPA.

Conclusions:

Findings confirm a strong association between LTPA and CRF and suggest an interaction between OPA and LTPA patterns on CRF within the workforce in Germany. Women without LTPA are at high risk of having a low CRF, especially if they work in physically demanding jobs.

Key messages:

- Women not practicing leisure-time physical activity are at risk of having a low cardiorespiratory fitness, especially if they work in physically demanding jobs.
- Different impact of domains of physical activity should be considered when planning interventions to enhance fitness among the adult population.

Cognitive function and type of physical activity: results from the FRéLE longitudinal study

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Background:

Previous cohorts have been notably criticized for not studying the different type of physical activity and not investigating household activities. The objective of this work was to analyse the relation between physical activity and cognitive decline in older people living in community. Impact of type of physical activity on the results has been realised.

Methods:

The study used data from the longitudinal and observational study , FrèLE (FRagility: Longitudinal Study of Expressions). The collected data included: socio-demographic variables, lifestyle, and health status (frailty, comorbidities, cognitive status, depression). Cognitive decline was assessed by using: MMSE (Mini-Mental State Examination)and MoCA (Montreal Cognitive Assessment). Physical activity was assessed by the PASE (Physical Activity Scale for the Elderly). This tool is structured in three sections: the leisure activity, the domestic activity and the professional activity. Logistic regressions and proportional hazards regression models (Cox) were used to estimate the risk of cognitive disorders.

Results:

At baseline, the prevalence of cognitive disorders was 6.9% according to MMSE. In total, 1326 participants without cognitive disorders were included in the analysis. The mean age was 77.4 years, and 52.1% of the participants were women. After a 2 years long follow-up, we found cognitive disorders on 92 participants (6.9%). Physical activity at baseline is lower in older adults for whom cognitive decline was observed after two years of follow-up. Subclass analyses showed that leisure and domestic activities were associated to cognitive decline, but not professional activities.

Conclusions:

Analysis showed a relationship between cognitive disorders and type of physical activity. The current study will be completed by the MoCA for mild cognitive impairment. These findings compared to other ongoing studies will contribute to the debate on the beneficial effects of physical activity on cognition.

Key messages:

- The work allowed us to analyze the link between the different types of physical activity and mild to severe cognitive disorders. The aim is to put in place preventive policies of aging.
- The work allowed us to see the effect of the different types of physical activity and the impact of the statistical method on the results.

Monitoring of obesity in the Italian adult population: preliminary results of 1998-2018 trend

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Background:

Obesity is a risk factor for the majority of non-communicable diseases-NCDs. In the Italian country profile, the NCD Risk Factor Collaboration estimated the 2010 obesity prevalence at 19.0% (95% confidence interval - C.I. 15.7-22.7) in women aged 18 years and over and 18.5% (95% C.I. 15.1-22.0) in men, with a very low probability (2-9%) of halting the increase of obesity by 2025 (WHO global obesity target). This preliminary analysis aims to assess 20 years trend of BMI and obesity in the Italian general adult population using the data collected within the CUORE Project.

Methods:

Mean of BMI and prevalence of obesity (BMI > = 30 kg/m2) in random samples of resident population in 6 Italian Regions, aged 35-74 years, stratified by age and sex, were assessed in an on-going survey started in 2018 (men 612; women 649), and compared to those assessed in the same Regions in 1998-2002 (men 1933, women 1926) and in 2008-2012 (men 1306; women 1318). Weight and height were measured using standardized methodologies. Surveys were partly funded by the Italian Ministry of Health-CCM and approved by the National Institute of Health ethical committee.

Results:

In men, mean values of BMI resulted 26.6 kg/m2 (95% C.I. 26.4-26.8) in 1998 survey, 27.5 (27.2-27.7) in 2008 and 26.5 (26.1-26.8) in 2018; prevalence of obesity was 16.8% (95% C.I. 15.1-18.4) in 1998, 23.5% (21.2-25.8) in 2008 and 17.3% (14.4-20.4) in 2018. In women mean values of BMI were 26.1 kg/m2 (95% C.I.: 25.9-26.4) in 1998, 26.4 (26.1-26.7) in 2008 and 25.5 (25.1-25.9) in 2018; prevalence of obesity was 20.7% (95% C.I.: 18.9-22.5), 21.9% (19.7-24.2) and 19.0% (15.9-22.0) respectively.

Conclusions:

Preliminary data of first 6 Regions (out of 10 to be examined in the on-going survey) suggest that mean BMI and prevalence of obesity in Italian adult population are still very high; if confirmed, in the last ten years a reduction seems to be occurred increasing the probability of meeting the WHO obesity target by 2025.

Key messages:

- Mean BMI and prevalence of obesity in Italian adult population are still high.
- If confirmed, in the last ten years a reduction of mean BMI and prevalence of obesity in Italian adult population seems to be occurred.

Trends in the co-occurrence of cardiovascular risk factors by education in Finland, 1997–2017

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Background:

Understanding on sociodemographic variation of the co-occurrence of cardiovascular disease (CVD) risk factors is crucial for planning public health policy and future prevention strategies. We aimed at examining 1) the co-occurrence of smoking, hypertension, elevated cholesterol and obesity by education, and 2) the trends in educational differences in the co-occurrence of these risk factors in Finland.

Methods:

We used cross-sectional health examination surveys carried out every five years among the general adult population: for 1997-2012 the National FINRISK Study and for 2017 the FinHealth 2017 Survey. Respondents aged 25-64 years were included in the analyses (n = 25,036). Current smoking, obesity (BMI$\geq$30 kg/m2), hypertension ($\geq$140/$\geq$90 mmHg or medication) and elevated serum total cholesterol ($\geq$5.0 mmol/l or medication) were used for the risk factor accumulation score with categories 1) zero, 2) one, 3) two, and 4) three or four elevated risk factors. Multinomial logistic regression was used to estimate predicted probabilities for each category.

Results:

Overall, the risk factor score was more favourable among women than men, and among high education groups than low education groups in both sexes. The lowest risk factor score class became more prevalent in all education groups in both sexes over time. The change in educational differences was not significant. However, the intermediate education group approached the highest education group over time.

Conclusions:

Our data indicate an overall transition towards a more favourable risk factor score in Finland, in 1997-2017. The score among the intermediate education group approached that among the highest education group. The tendency of risk factor accumulation among those with least education remained during the study period, which raises a need to develop and implement interventions and public health policies that would be effective in decreasing the risk factor burden particularly in this group.

Key messages:

- Overall, a favourable trend of diminishing risk factor prevalence was seen.

- The tendency of accumulation of major CVD risk factors among the least educated subjects remained from 1997 to 2017.

Variants in Neuromedin U pathway genes and risk of cardiovascular disease in an Italian population

Francesco Gianfagna

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Background:

Neuromedin U (NMU) is a hypothalamic neuropeptide with several functions, considered to be a potential therapeutic target for diabetes mellitus. The aim of this study was to analyse the association between genetic variants in NMU pathway genes and cardiovascular risk, in Italian adults from the general population recruited for the Moli-sani study.

Methods:

A total of 4,039 participants (mean age 55.8±12.1 SD; men 46.1%) were randomly selected from the whole study population (N = 24,325; recruitment years 2005-2010). DNA from blood samples stored in the Moli-sani biobank were genotyped for 14 single nucleotide polymorphisms (SNPs) in the genes encoding for NMU, Neuromedin S (NMS) and their receptors NMUR1 and NMUR2. Cox regression analysis (age, sex, BMI, blood pressure, glucose and lipid levels as covariates) was performed to estimate the associations between SNPs and fatal or non-fatal CVD events (validated myocardial infarction or stroke), identified from death certificates and electronic records during a median follow-up of 4.5 years. A genetic score was then computed.

Results:

CVD events (N = 93) were associated with mutant alleles in the NMU SNP rs55796004 (HR = 1.94; 95%CI:1.08-3.48) and rs4856020 (HR = 0.52; 95%CI: 0.29-0.94) and in the NMS SNP rs12474526 (HR = 0.48, 95%CI:0.28-0.81), independently from CVD risk factors. A SNP in NMUR1 showed a borderline association (rs6754952, HR = 0.74; 95%CI:0.54-1.00). The derived genetic score was associated with CVD incidence with a HR of 1.57 (95%CI:1.25-1.96, per 1 score SD). A HR of 7.33 (95%CI:1.68-32.01) was found comparing the last vs the 1st decile of the genetic score.

Conclusions:

Italian adults carrying variants in NMU pathway genes are at increased CVD risk. Intermediate phenotypes, mediating this association independent of classical risk factors, are unknown and should be investigated. Once confirmed, these results could be useful to improve CVD risk assessment and to plan cost-effective interventions.

Key messages:

- Polymorphisms in NMU pathway genes are associated with CVD risk independently of classical CVD risk factors, suggesting a potential clinical utility in CVD prediction when added to CVD risk algorithms.
- The unknown phenotype mediating the association between NMU genes polymorphisms and CVD development could be the neglected CVD risk factor potentially explaining the unpredicted CVD fraction.

8.M. Interventions to change behaviours

Effects of a behavioural approach on lifestyle habits: a before-after interventional study

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The study aimed to offer a path of empowerment to promote adherence to healthy diets and physical activity for cancer prevention,according to the recommendations of the World Cancer Research Fund (2007): 5 servings per day of fruit / vegetables, protective food (EVO, green tea, cruciferous, turmeric, dried fruit), practicing at least 30 minutes of moderate physical activity.

Participants were volunteers between 18 - 70 years old divided in groups of 25/30 people. They followed a course of 7 theoretical and practical meetings (lifestyles, resilience and cooking workshops) and they signed a contract to comply with the promoted habits, which were verified through questionnaires administered during the engagement phase (T0), three months after the beginning of the course (T1) and one year after (T2).

Six editions (2014-2017) were made for a total of 153 subjects involved (75% women, average age 54 years old). Of these, 116 eligible subjects (76%) were also evaluated at T1 and 63 volunteers (41.7%) at T2. With respect to the dropped out rate, 24% of the subjects left the study prior T1, while 45% of volunteers left it prior T2. The established goal (40% expected target) was accomplished and excided the expectation, since more than 80% of the subjects involved at T1 achieved an improvement in healthy diet (increased consumption of vegetables and fruit, daily consumption of at least one food with antioxidant action) and physical activity (at least 30 minutes a day). Furthermore the 77% of T1 compliants (50% expected goal) retained healthy eating and healthy motor behaviors even after a year (T2).

The proposed path of empowerment positively affected nutrition and promotion of physical activity at 3 months after the intervention (T1) and were maintained even after a year. The latter result was partly scale down by a high drop out. The path of empowerment, appropriately adapted, can complete the diagnostic therapeutic pathways for breast cancer and colon cancer survivors.

Key messages:

- People are easier involved in empowerment paths aimed at fighting a single disease, for example cancer, but good results can be achieved simultaneously for all non-communicable diseases.
- Motivational communication for healthy eating, physical activity and stress prevention must become an integral part of the therapeutic diagnostic pathways of cancers and non-communicable diseases.

One year update following removal of high sugar sweetened beverages from a university campus

Patricia Fitzpatrick

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Healthy UCD is a health promotion initiative designed to create a sustainable healthy university campus. The aim of the study was to report on student and staff attitudes and provider attitudes to the removal and income from drinks one year following the removal of carbonated sugar sweetened beverages (HSSBs) on a large university campus, University College Dublin (UCD).

In 2018 Healthy UCD, in partnership with the contracted beverage supplier, conducted a seven-week trial where all HSSBs were removed from the main campus and replaced with sugar-free or low-sugar alternatives. This was in advance of a levy on HSSBs to be introduced nationally. During the trial, drinks sales rose by 4%. Following the trial, a survey of students was conducted across the campus which provided the motivation to the University Management Team to approve removal of HSSBs on a permanent basis. Staff and student complaints were monitored over the following year. Drinks sales data was obtained from retail outlets for 2019 and compared to the same sales period for the previous year.

Retail sales for drinks continued to grow despite removal of HSSBs, with 8% growth in the year following removal. A small number of complaints were documented. The most important was a query about those staff and students with diabetes mellitus who might need high sugar energy products and the removal of a particular HSSB which is sold in Ireland. This HSSB had not in fact previously been sold in UCD. The national advice regarding access to high sugar products in the case of hypoglycaemia from Diabetes Ireland was provided satisfactorily for all staff and students.

Removal of HSSBs from a university campus is possible; advice must be provided to those who may feel negatively impacted by the change.

Key messages:

- Removal of high sugar sweetened drinks from a university campus is possible; advice must be provided to those who may feel negatively impacted by the change.
- Sales can grow despite health-related changes of the food environment.

Recruitment of women from disadvantaged areas to a smoking cessation intervention: preliminary findings from the We Can Quit2 (WCQ2) cluster randomised controlled trial

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Background:

Recruitment of participants into community randomised controlled trials (RCTs) is problematic; however, recruitment of participants from disadvantaged backgrounds to community smoking cessation trials is especially challenging. This paper will present recruitment and retention rates, successes and challenges in the We Can Quit2 (WCQ2) community intervention trial of smoking cessation in disadvantaged women.

Methods:

We Can Quit, is a smoking-cessation behavioural support intervention delivered by community facilitators through 12-weekly group sessions, with free Nicotine Replacement Therapy, against a form of usual care. Sample size was estimated at 194 in total (97 per arm). Four matched pairs of districts of approximately 10,000 women in each (eight clusters) were identified from which eligible women could be recruited. The recruitment target was 24-25 per cluster. Consent was obtained prior to cluster randomisation. Individual participants were recruited via print media such as leaflets, posters, information stands in local facilities e.g. creches as well as through local and social media e.g. radio and targeted Facebook advertisements. A small financial incentive was provided to aid retentions.

Results:

208 women registered for the study. Women heard about WCQ2 mainly via Facebook or Twitter (30.4%), and personal networks (16%) 184 (84.5%) were eligible with living outside the area being the most common reason for ineligibility. 125 (67.9% of eligible women; 65.5% of target) consented. Retention rates will be presented. Barriers to recruitment included time of year. Successful strategies included application of in-depth knowledge of local communities to target eligible women. Social media helped target younger women. Recruitment occurred over four waves, allowing for the application of iterative learning.

Conclusions:

Recruitment to a community based RCT was challenging however, local community engagement, use of social media, and personal networks were successful strategies. Early and active engagement with local stakeholders with in-depth knowledge of the community is important.

Key messages:

- Intense planned community mobilisation is needed to recruit disadvantaged women to smoking cessation trials.
- Social media an important route to recruitment of younger women.

8.N. Citizen and patient access to information and participation

Public participation in health data governance: a scoping review

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Background:

The sheer growth of the health data shared and traded globally holds great promise and menace to public health. Big health data can foster scientific advancements with potential to heal millions across the globe. However, inerasable digital footprints left by the use of apps and digital services challenge people's privacy and autonomy in (un)foreseeable ways that may cause them to stop sharing data. While many argue that public participation in data governance is a right, others view it as a means to increase data subjects' recruitment and amass large quantities of data. Little systematic knowledge exists, however, about the arguments for and impact of public participation on health data policy and management.

Methods:

A descriptive systematic scoping review was performed. Studies indexed in PubMed, WoS and PsycINFO published until March 2019 were searched. Only empirical, original, peer-reviewed studies reporting on public participation on health data governance were included. Eligibility and data extraction were performed by 3 researchers.

Results:

The 21 studies analyzed point to public participation in several governance dimensions including data access, linkage, dissemination and policy. Involvement of (potential) data subjects in health data governance was substantiated by democratic arguments of legitimacy, transparency and accountability. However, the need to earn public support for data generation and use can override these arguments and foster utilitarian approaches that may transform participatory exercises into a technology of legitimation for a priori made decisions. Furthermore, although public participation in data governance can deliver instrumental benefits (e.g. participant-centred data policy), systematic assessment of participatory exercises' impact is lacking.

Conclusions:

Public participation in health data governance can promote public trust in and thrust for science. Further research is needed to fully assess its impact.

Key messages:

- Democratic-led participatory exercises in health data governance can foster public trust in science.
- Further research is needed to fully assess the impact of public participation in data governance.

Solidarity and reciprocity in data governance: information sharing among gamete donors and recipients

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Background:

Decreasing fertility rates have spiralled a growth in demand for assisted reproduction technologies, including reproduction through donated gametes. Gamete donation is grounded on solidaristic practices traditionally focused on the gift of gametes. However, solidarity and reciprocity between donors and recipients may also be enacted through the sharing of other types of information (e.g. donation outcomes, medical and identifying information). Little is known, however, about these stakeholders' preferences regarding information sharing, which is crucial to promoting people-centred policy for data governance in gamete donation.

Methods:

A self-report structured questionnaire was completed by 69 donors and 161 recipients (participation rate: 77.4%) between July 2017 and April 2018 at the Portuguese Public Bank of Gametes. Opinions about access to donation outcomes and medical, extended profile and identifying information about recipients, donors and children were analysed using descriptive statistics.

Results:

Most participants considered that recipients should not have access to donors' identifying (92%) and extended profile (79%) information, but that they should access donors' medical information (58%). Donors stated more frequently that they should receive information about the outcomes of donation (e.g. pregnancies and births) than recipients (32% vs. 12%). Participants also disagreed with donors' access to recipients' medical (83%) and extended profile information (92%) and children's identifying information (98%).

Conclusions:

People-centred policy on data governance in gamete donation should be informed by donor and recipients' preferences. Sharing donation outcomes with donors and medical information from donors with recipients can foster solidarity and reciprocity between them. This requires the development of a matching mechanism (via consent) to accommodate their preferences.

Key messages:

- Policy on data governance should be informed by gamete donors and recipients' preferences.
- Sharing desired information with donors and recipients can foster solidarity and reciprocity between them.

Solidarity in genomic healthcare? Results of the Belgian citizen forum (2018)

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Genomic medicine requires to collect and use a huge amount of patient and citizen data. Therefore, the Belgian Minister of Public Health decided to organize a citizen forum on the ethical, legal and societal issues (ELSI) surrounding the use of genomic information in healthcare. This initiative follows the trend of public involvement in Europe regarding ELSI in genomics.

During three weekends, a panel of 32 citizens, informed by experts of different backgrounds, produced political recommendations. We will focus on their conception of solidarity, which is crucial to take into account when considering policies on data sharing in genomics.

Citizens of the panel consider their genome simultaneously as the individual's property and as something to be shared for the common good. As a consequence, the panel agrees to support solidarity provided individual interests, such as privacy protection, are respected. By solidarity, the panel means supporting genomic data sharing for the common good, which they define as scientific research that improves knowledge (on both prevention and diagnostics) to build a fair society where everyone has an equal opportunity to live healthy.

According to the panel, the government should actively encourage citizens to share their genomic data, but no one can be forced to do it. For instance, the government could motivate citizens to share their genomic data by partially reimbursing genomic tests undertaken without medical prescription. However, because everyone has an equal right to live healthy, the panel esteems that genomic tests for medical needs should be accessible for all, thanks to a well-thought-out and sustainable refund system.

Key messages:

- Citizens support solidarity in genomic medicine, but demand proportional individual protection.
- As citizens become increasingly important stakeholders in genomic medicine, all public authorities should actively engage citizens in relevant healthcare policies.

Online health information seeking by parents for their children. A systematic review

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Background:

Parents commonly use the internet to search for information about their child's health-related symptoms and guide parental health-related decisions. Despite the importance of parental search behaviors, this area of research remains understudied and no comprehensive review of this research area has been conducted. Our aim is to summarize the existing findings on searched topics and search experience of online health information seeking among parents for their children with focus on building an agenda for further research and recommendations for public health.

Methods:

We conducted a comprehensive systematic literature review of parental online health information seeking studies in the databases of PsycInfo, JMIR and PubMED. Studies from 1994 to June 2018 were considered.

Results:

A total of 33 studies met the eligibility criteria, including 8665 parents. Findings suggest that parents worldwide are heavy online users of health-related information for their children across highly diverse circumstances. Parents report wishing for more guidance especially from their pediatrician on how to find online health information; however, studies found parents rarely report discussing online health information with their healthcare providers. Only five studies investigated health anxiety related to online health information and prevalences ranged from 14% and 52%, three examined theoretical models, and only three examined consequences of search behaviors more in-depth.

Conclusions:

Results of this systematic review identify important gaps in theoretical models, risk factors to predict search behaviors, and health outcomes associated with parental search behaviors. An agenda for future research will be presented.

Key messages:

- Parents are heavy users of the health-related web, but more research is needed to support them in effective use.
- Tailored digital public health approaches could empower parents to make better use of online resources and improve health-related decision making.

''Patient participation'': Towards a conceptual model and dimensions' descriptions

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Background:

An extensive body of literature has emerged advocating concepts on the collaboration between patients and healthcare systems, such as patient-centred care, patient engagement and patient participation. Several authors have attempted to provide clear definitions of these concepts but no consensus has been agreed upon. This may have hampered their developments and implementation. We thus aim to propose an integrative conceptual model of ''patient participation'' and a description of its dimensions.

Methodology:

Recently, a scoping review studied transversally the concepts related to this collaboration under a generic term ''patient participation''. Based on this review a conceptual model and a description of its dimensions was developed. A summative approach was used to produce the dimensions' description and consisted in systematically adding every new information mentioned in the 38 articles of the scoping review to the final description. The conceptual model was developed based on the theorization methodology of Paillé & Mucchieli (2016).

Results:

The model included 28 dimensions, 6 influencing factors and 4 expected outcomes. They were described and modeled at the three levels of the healthcare system (micro, meso and macro). The model illustrate the relation between: (1) the healthcare professionals' (HPs) and patients' attitudes and skills, and the collaboration between these healthcare actors (micro level); (2) the organisational structure of healthcare institutions and the HPs' and patients' training and access to resources (meso level); (3) results at the macro level did not provide enough information to relate the retrieved dimensions.

Discussion: The production of a conceptual model and the description of its dimension may allow a consensus on the dimensions related to ''patient participation''. Despite its complexity, this model may favour ''patient participation's'' implementation and operationalization at all levels of the healthcare system.

Key messages:

- The results of this study address the confusion existing in the scientific literature on the generic concept of ''patient participation''.
- The results of this study provide a global overview of ''patient participation'' and may impact clinical practice and can be a base for training programs for healthcare professionals and patients.

The determinants of patients' opinions about physicians' services in the Internet-based ranking site

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Background:

The rankings of physicians' services constructed on the basis of the feedback from patients became a popular form of the appraisal of their work. The main objective of the study was the assessment of predictors of the patients' satisfaction with services provided by physicians of selected specialities.

Methods:

The opinions about physicians of three specialties (paediatricians (P), gynaecologists (G) and family medicine physicians (FM)) who accumulated the highest numbers of opinions, were extracted from the rankinglekarzy.pl website. Only 100 physicians of each specialty who were the most frequently scored were included. Apart from the scores on six individual criteria, the data reflecting the number of opinions (NOO), the type of medical practice (TMP), number of specialties (NS) and PhD title (PhD), as well as the location of the practice (LOP) were collected. The total score was calculated as the sum of scores assigned to individual criteria.

Results:

The final data set consisted of 9482 opinions (4234 for P, 2057 for FM, and 3191 for G). The multivariate regression model revealed that odds of obtaining the maximum total score (MTS) depended on S, NOO, LOP, and TMP. G had higher odds of receiving the MTS than P and FM (OR, 95%CI, 0.75, 0.68-0.83, and 0.72, 0.64-0.82, respectively). MTS was less frequently received by physicians practicing in medical centres (0.56, 0.49-0.62) and hospitals (0.55; 0.44-0.70) than in private practices, but not by those practicing in more than one place (3.81, 2.78-4.21). Higher NOO was related to lower odds of receiving MTS (0.992; 0.990-0.995).

Conclusions:

There are significant differences in patients' assessment of services provided by physicians of three analysed specialties. The type of practice has a considerable impact on the satisfaction of patients. Interestingly, it seems also that the number of specialties and PhD title do not influence patients' opinions about the quality of the medical doctor's services.

Key messages:

- Internet-based rankings of physicians may be an important source of information about provided medical services.
- Key factors influencing patients' opinions include specialty, the type and the location of medical practice, but not scientific a scientific title and number of specialities.

Umbrella review of strategies to improve uptake of screening programmes

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Introduction:

High participation rates in screening programmes targeting non-communicable diseases are instrumental in achieving full screening benefits; however, screening programmes remain underused, especially among vulnerable populations. We conducted an umbrella review to assess the type of approaches screening programmes use to maximise uptake, the effectiveness of the approaches and the impact on equity.

Methods:
Electronic databases were searched (1999-2019) for systematic reviews on approaches aimed at improving uptake of screening programmes for adults in middle- and high-income countries, with participation rate as the primary outcome. A narrative synthesis was undertaken to present the results by strategy, screening programme and strength of evidence. This study was registered in PROSPERO [CRD42019132087].

Results:
In total, 3,059 records were identified, and 82 systematic reviews were included. Preliminary findings suggest contradictory evidence, and effectiveness appears to depend on the disease screened for and specific program implementation. Invitation methods including letters and direct reminders seem to work universally. However, combined approaches using access-enhancing, individual- and system-directed strategies seem to be more effective than single approaches such as invitation methods alone. Few studies evaluated the impact on equity.

Conclusions:
Strategies to improve uptake of screening programmes have the potential to be effective. However, there are many components within the system, either at individual, health care professional or health care system level that can influence uptake of screening programmes. Within each screening programme, it is likely that a range of interventions is needed to improve the uptake as opposed to a single intervention.

Key messages:
- Improving uptake of screening programmes is a complex issue with many factors influencing the process.
- A range of interventions is favoured over single interventions.

8.O. Skills building seminar: Environmental Burden of Disease: methods and applications

Organised by: Sciensano
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There is an increasing body of evidence showing that environmental risk factors can cause illness and death. For example, particulate matter triggers lung cancer and noise increases the risk of heart attack. Consequently, governments worldwide should aim to mitigate the negative health effects of environmental exposures. The concept of Environmental Burden of Disease (EBD) aims to quantify the number of illnesses and deaths associated with various environmental risk factors, as well as the health benefits of potential prevention and mitigation measures. Current EBD studies commonly use the Disability-Adjusted Life Year (DALY) metric as a common currency for integrating the effects of ill health and premature death, thereby facilitating the comparison of the burden of various environmental risk factors amongst each other and with other risk factors.

The EBD approach has been used since the 1990s, spearheaded by the World Health Organization. However, even today, the approach is not yet commonly adopted across Europe, mainly because of a lack of capacity. At the same time, the EBD approach remains in full development, trying to adapt to the current state of research. The overall aim of this skills building seminar is therefore to a) create awareness of the EBD approach, and b) to present and discuss current methodologies and future developments.

The skills building seminar consists of four presentations. In the first presentation, the history and general methodological framework of the EBD approach will be outlined. Next, three presentations will present EBD case studies. These presentations will explain in a didactic, step-by-step way how the estimates were produced, and how technical challenges were addressed. Finally, ample time will be foreseen to discuss methodologies, challenges, possible solutions, and future collaborations to increase EBD capacity within Europe.

Key messages:
- Participants will gain insights in the use, strengths and weaknesses of the Environmental Burden of Disease approach.
- Participants will develop an understanding of current Environmental Burden of Disease methodology.

Introduction to the Environmental Burden of Disease concept – history, methods and selected results

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Background:
The Environmental Burden of Disease (EBD)-concept was introduced by the World Health Organization to quantify the impacts of environmental risk factors on population health in a comprehensive and comparable way. Since the first Global Burden of Disease (GBD)-study the EBD-methodology was used in numerous global, regional and national assessments.

Methods:
In the EBD-concept data from different sources are joined using a standardized framework. To calculate the EBD several steps need to be taken into account. First, the exposure of the selected population towards an environmental risk factor is estimated. In a second step, exposure data and information from an exposure-response-function are combined by using the population attributable fraction formula. In a last step, the attributable fraction (percentage) is multiplied by the disease burden resulting from a selected health outcome to estimate the share of disease burden attributable to the environmental risk factor.

Results:
Since the first GBD-study several stakeholders have used the EBD-concept to estimate the disease burden attributable to environmental risk factors. This lead to an increased number of available data sets, which - due to the varying assumptions used in the models - are not ad hoc comparable among each other. Generally, the results of EBD-assessments are presented using disability-adjusted life years (DALY) as the core measure of burden of disease assessments. However, e. g. due to lack of data, assessments also focus on the number of attributable deaths, illnesses or single components of the DALY such as the years of life lost due to premature mortality (YLL).

Conclusions:
The EBD-concept allows to compare the impact of environmental risk factors on population health. Though the general concept is widely standardized, assumptions on model parameters can lead to varying results. Therefore, when communicating EBD-results it is necessary to be very transparent about data and model inputs.

Environmental Burden of Disease in the Netherlands

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Background:
RIVM-National Institute for Public Health and the Environment published as part of the 2018 Dutch Public Health Foresight report, an update of the Disease Burden,

including the Environmental Burden of disease. This report is not only relevant for the Ministry of Health but also for other policy arenas, to support policy making with the objective of improving health.

Methods:

Environment factors are distinguished by indoor and outdoor environment. The following environmental factors have been taken into account; Air pollution (PM10/NO2), UV radiation, noise, second-hand smoking, carbon monoxide poisoning and indoor dampness. The effects of chemical substances are not included. Making use of the population attributable fraction, the fraction part of mortality, disease burden and health care expenditures attributable to environmental factors is calculated. For this method, data on exposure as well as the dose-response relationship (relative risks) are used.

Results:

Some 4% of the disease burden in the Netherlands is caused by environmental factors and that costs us more than 1 billion euros of care per year. This corresponds with 200,000 DALYs; of which 175,000 by outside environment and 25,000 by indoor environment. In total, almost 13000 deaths can be attributed to environmental factors. Air pollution causes by far most of this disease burden. After that, exposure to UV radiation and second-hand smoking rank highest.

Conclusions:

A considerable disease burden, number of deaths and health expenditures is attributable to environmental factors and could at least in theory be avoided by improving our environment. Air pollution in particular plays an important role in this. In addition, even a greater health gain could be achieved if environment factors are tackled and healthy behavior is at the same time stimulated.

Burden of disease due to nitrogen dioxide exposure in Germany

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Background:

Numerous studies identified adverse effects of air pollution on health. According to the recent Global Burden of Disease Study about 2.9 million people died prematurely due to the effects of ambient particulate matter (PM) pollution in 2016, which resulted in about 70 million years of life lost (YLL). In addition to PM, a growing body of evidence shows convincing associations between nitrogen dioxide (NO2) with several health outcomes. The case study provides a health risk assessment for NO2 in Germany.

Methods:

A systematic review was performed to select health outcomes with strong evidence for an association with NO2 and to derive an updated exposure-response function (ERF). The exposure assessment was performed on a 1x1 km^2 grid by combining measured and modelled data (annual means of NO2 background concentration) with population density. Exposure data and the ERF were combined by the population attributable fraction formula. The main analysis was performed using a counterfactual of 10 $\mu g/m^3$.

Results:

Only for cardiovascular mortality the evidence for the association with long-term NO2-exposure was rated as "strong". Thus, the main analysis merely included this outcome. For the year 2014, 5,966 (95% CI: 2,031-9,893) attributable deaths and 49,726 (95% CI: 16,929-82,456) YLL were estimated. Looking at time trends a decrease of disease burden was observed compared to the year 2007 where 7,832 (95% CI: 2,669-12,973) attributable deaths and 69.244 (95% CI: 23.601-114.690) YLL due to NO2 were calculated.

Conclusions:

Our results show a considerable burden due to NO2 in Germany. Compared to previous estimates for PM (ca. 41,100 attributable deaths in 2014) the burden due to NO2 is much lower. However, due to methodological constraints we could not incorporate higher concentrations from traffic hotspots. This, and the fact that we only considered one health outcome in our main analysis, suggests that our results might be an underestimation.

Burden of disease of heavy metals in population clusters: towards targeted public health strategies

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Background:

Humans are exposed to heavy metals from certain foods, thus specific dietary patterns may lead to high burden of disease (BoD). By identifying diet, lifestyle and socio-demographic characteristics of population groups with highest BoD, targeted preventive strategies can be developed. We aimed at identifying clusters and characteristics of Danish individuals with highest BoD due to food exposure to three heavy metals: methylmercury (MeHg), cadmium and inorganic arsenic.

Methods:

We collected diet, lifestyle and socio-demographic information of 3,946 individuals in the Danish National Survey of Diet and Physical Activity. Occurrence of heavy metals in food was obtained from Danish food monitoring. We applied machine learning self-organizing maps to group individuals according to similarities in diet, lifestyle and socio-demographics, and estimated BoD due to metal exposure in terms of Disease-Adjusted Life Years (DALY). We will present calculation steps of our approach in a tutorial-like way and demonstrate its applicability to other cases.

Results:

We identified 13 population subgroups with distinct dietary and lifestyle characteristics. The estimated BoD varied largely between subgroups, with five subgroups experiencing a BoD > 10 DALY/100,000. The cluster bearing the highest BoD (26.2 (95% uncertainty interval (UI): 10.3, 50.6) DALY/100,000) was significantly different from the cluster with the lowest BoD (5.1 (95% UI: 2.5, 9.2) DALY/100,000) (preliminary). BoD was higher in subgroups with diet and lifestyle considered healthy. Most of the BoD was due to MeHg, particularly in female-dominant subgroups.

Conclusions:

Linking machine learning, exposure assessment and burden of disease metrics, this novel approach identified population subgroups with higher BoD due to exposure to three heavy metals. It can be expanded to estimate BoD of other chemicals, and used to develop targeted preventive strategies to reduce BoD in more affected subgroups.

8.P. Trends in primary, ambulatory and integrated care

How primary care and public health interact in local health contracts in France?

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The demographic and epidemiological changes orient health care services towards communities with a focus on prevention and health promotion. Moreover, in France, the rapid decline of General Practitioners affect access to care in certain areas. Thus, it has made a call for interaction of primary care (PC) services and public health which can be strengthened by the actions at the local level. In 2009, the local health contracts (Contract local de santé; CLS) were developed to foster collaborative actions on the social determinants of health and to improve access to care. Considering the critical contribution of PC in these issues, one may ask how CLS mobilized PC and facilitate linkages between actions oriented toward population and primary care.

The objective of this ancillary study (part of the CloterreS project), is to explore how often and how CLS involve PC in access to care and public health related actions.

A mixed-method study based on document analysis, with a random sample of 17 CLSs (N = 165) from all French regions, was developed. A quantitative analysis of the 440 forms identified in 17 CLS computed frequency of involvement of PC actors and/or PC organizations and a qualitative analysis defined typology of interactions.

All CLS and 20.1% (n = 86) of the forms involved PC actors and 43.2% (n = 185) concerned access to care. Of the access to care forms, 35.7% (n = 66) concerned PC. The most common strategies related to actions on the health workforce and on planning of services. The role of primary care professionals was as the target of the action and rarely as leader and partner.

PC, mostly GP's involvement, had a big place and access to care was at the core of local health contracts. The impact of CLS as an instrument to invite interaction public health and healthcare at the local level should be further assessed.

Key messages:

- Many of the local access to care actions involved primary care professionals.
- The local level appears strategic to integrate public health and health services yet more evidence is needed on its role.

Organizational Culture and Readiness for Change in German pediatric outpatient centres

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Background:

Organizational readiness for implementing change (ORIC) is presumed key for successful change in healthcare settings. At the same time, ORIC is theorized to depend on cultural and other factors of the organizational context. Within the process evaluation of the PART-CHILD intervention in interdisciplinary pediatric outpatient centres (IPOC) for children with chronic health conditions in Germany, we assessed to what extent ORIC is associated with organizational culture and further contextual factors.

Methods:

In 2019 data was collected from health care professionals in 12 IPOC, using a questionnaire comprising subjectively perceived ORIC (measure: ORIC, 5-point Likert scale), the organization's culture (measure: Competing Values Framework, four domains: Group, Developmental, Rational, and Hierarchical Culture) and further contextual factors (e.g., size of the facility, number of patients per year).

Results:

In all, responses from 206 health care professionals were included in the analyses (response rate: 47%; preliminary results). Analyses show a moderate ORIC (3,4; SD = 0,6), positively associated with Group Culture (r2 = 0,178, p = 0,01) and negatively associated with Rational Culture (r2 = -0,273, p < 0,001). We found no correlations between ORIC and Developmental or Hierarchical Culture. In congress presentation we report to what extent ORIC depends on further contextual factors (e.g., size of the facility, patients' demographic characteristics).

Discussion:

IPOC with a strong Group Culture show a higher ORIC than those with prevailing Rational Culture. To potentially increase effective implementation of interventions in healthcare facilities in future, a preceding evaluation of the organizational culture might be valuable. Thereby, settings with prevailing Rational Culture could be identified at an early stage and receive additional implementation support, e.g. through enhancing the Group Culture among the health care professionals on-site (e.g, executive coaching).

Key messages:

- Both organizational readiness for implementing change and organizational culture are presumed to be important for implementing change in healthcare facilities' routine care.
- Assessing both constructs prior to implementing a costly intervention with demanding change processes within healthcare settings could be valuable.

Time to use of primary health care after being informed about increased health risk in HUNT

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Background:

Seeing a general practitioner (GP) after first discovering conditions related to ill health is important for the prevention or timely treatment of major diseases. Receiving information about increased health risk, e.g. from participating in a health study, might increase awareness and trigger a visit to the GP. The question is: Do people allocated in different socioeconomic (SE) groups respond differently to receiving information about increased health risk? This could indirectly increase socioeconomic inequalities in health. In this study we are aiming to analyse patterns of GP contact after being informed that measurements from the HUNT study had deviant values suggesting increased health risk.

Methods:

We use data from several Norwegian national registries which were linked to the HUNT study (The Nord-Trøndelag Health Study). Cox-proportional hazard models as well as repeated measurement models are estimated in order to explore patterns of GP contact. Health exposures are: measured high blood pressure (BP) (systolic and diastolic), high blood glucose, high serum cholesterol. SE status is measured through educational attainment (low, medium, high).

Preliminary results:

In the analysis for GP contact within a year after HUNT, we had information on 42,581 persons, with 295,188 contacts with primary health service. In our data 8% had clinical measurements indicating high BP (160/100), 60% had high serum cholesterol levels (5,2 mmol/L) and 3% had high blood glucose levels (> = 9 mmol/L). Women in the lowest social group generally used less time to see their GP than both higher educational groups. For men this was less clear cut.

Conclusions:

We aimed to analyse SE differences in response to receiving information about increased health risk. The analysis thus far suggests that women in lower SE groups see their GP a relatively short time after being informed. This is less clear cut for men. Further analysis will shed further light on utilisation patterns.

Key messages:

- Women in lower SE groups take less time to see a GP after being informed of increased health risk.
- SE differences in primary health care utilisation might be less clear cut than previously suggested.

Characteristics and outcomes of clusters of multimorbid patients in UK general practice

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Background:

Current clinical specialities, guidelines and quality of care metrics are organised around single diseases and treatments of multiple conditions are rarely coordinated, resulting in insufficient or even conflicting care. This study uses large scale English general practice (GP) records to identify and characterise clusters of patients based on their multimorbidity to allow better design of health services and highlight groups that require additional interventions.

Methods:

This is a retrospective cohort study that includes multimorbid adult patients (N = 113,211), from a random sample of 391,669 English patients with valid GP records in 2012 where 38 long-term conditions were defined. Latent class analysis, stratified by age groups, was used to identify multimorbidity clusters. Class solutions are validated and associations between multimorbidity clusters, patient characteristics, public health service utilisation and mortality are assessed.

Results:

Poor socioeconomic status is associated with clusters with higher service use and mortality risk. Physical-mental health co-morbidity is a major component of multimorbidity across all age strata. The clusters with highest age-stratified mortality risk in under 65 year olds were linked to alcohol and substance misuse, whereas in over 65 year olds they were linked to cardiovascular disease. The largest cluster in the 85+ years strata (58%) has the lowest number of morbidities, a low degree of service use and mortality. Consistency was seen across identification and validation data.

Conclusions:

We find a clear distinction between morbidity clusters, both in the prevalence of long term conditions within them, and in their associations with outcomes (service use and mortality). Specific health services and interventions might be more effective when targeted on the distinct types of multimorbidity we have identified, with a particular focus on the morbidity clusters associated with the worst patient outcomes.

Key messages:

- The first study to derive age stratified multimorbidity clusters from a large GP record system, whose patients are representative of the English population.
- Knowledge about particularly dangerous clusters of multimorbidity, such as those involving alcohol and drug use in 18–64 years old, and cardiovascular disease in those 65 years or older.

Individual and area-level factors associated with ambulatory care sensitive conditions in Finland

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Background:

Geographic variation is common in ambulatory care sensitive conditions (ACSCs) - used as a proxy indicator for primary care quality. Its use is debated as it is more strongly associated with individual socioeconomic position (SEP) and health status than factors related to primary care. While most earlier studies have been cross-sectional, this study aims to observe if these associations change over time. Finland offers a good possibility for this due to its extensive registers and unexplained over time convergence of geographic variation in ACSC.

Methods:

This observational study obtained ACSCs in 2011-2017 from the Finnish Hospital Discharge Register and divided them into subgroups of acute, chronic and vaccine-preventable causes. In these subgroups we analysed geographic variations with a three-level multilevel logistic regression model - individuals, health centre areas (HC) and hospital districts (HD) - and estimated the proportion of the variance at each level explained by individual SEP and comorbidities, as well as both primary care and hospital supply and spatial access at three time points.

Results:

In the preliminary results of the baseline geographic variation in total ACSCs in 2011-2013 - the model with age and sex - the variance between HDs was nearly twice that between HCs. Individual SEP and comorbidities explained 46% of the variance between HDs and 29% between HCs; and area-level proportion of ACSC periods in primary care inpatient wards a further 12% and 5%. This evened out the unexplained variance between HDs and HCs.

Conclusions:

Geographic variation in ACSCs was more pronounced in hospital districts than in the smaller health centre areas. The excess variance between HDs was explained by individual SEP and health status as well as by use of primary care inpatient wards. Our findings suggest that not only hospital bed supply, but also the national structure of hospital services affects ACSCs. This challenges international ACSC comparisons.

Key messages:

- Geographic variation in ACSCs concentrated in larger areas with differing population characteristics.
- The national structure of hospital services, such as use of primary care inpatient wards, affects ACSCs.

Benefits of performing same day discharge lead and varicose interventions in active patients

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Background:

In France, 90% of varicose vein interventions are performed in ambulatory setting while it concerns 7% of angioplasty for lower extremities arterial disease (LEAD). In this study, we made the hypothesis that such disparities may partly be due to the burden of the post-procedural rehabilitation and its relation to patients' care-pathway and coordination.

Methods:

A retrospective study was conducted on 18 to 65 years old active population who benefited from varicose or LEAD interventions from January 2013 to June 2016 using data from the French National Health Insurance System. Post-procedural rehabilitation measure was the number of cumulated workday break and their renewals within 180 days after intervention. Negative binomial regressions, adjusted for age, gender, and comorbidities, were applied to test associations. The degree of coordination among health care professionals for post-procedural follow-up was tested using the continuity of care and the continuity of prescription indices.

Results:

Compared to inpatient care, day interventions decrease the incidence rate ratio (IRR) of cumulated workday breaks by 14% in both varicose vein and LEAD interventions. The decrease in the degree of coordination between care providers increase the IRR of cumulated workday breaks and renewals by 37% and 29% respectively for varicose, and 11% and 9% for LEAD interventions. The increase in the number of work break prescriptions delivered by the same category of providers decreases the IRR of cumulated workday breaks and their renewals in varicose by 25% and 21% but increases them in LEAD interventions by 240% and 106%.

Conclusions:

Day interventions have similar impacts on rehabilitations after varicose vein and LEAD interventions. However, coordination is critical. Our results highlight the need to pursue health regulatory agencies and healthcare professionals' works on multidisciplinary ambulatory care networks for better follow-up of acute day care interventions.

Key messages:

- Day intervention reduces cumulated workday breaks in endovascular interventions.
- Multi-specialty coordination of the qualified health care professionals is required in endovascular interventions, especially after angioplasty for LEAD in outpatient settings.

8.Q. Current issues in the health workforce

Migration intentions among Polish physicians - the profile of a potential migrant

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Background:

Polish physicians migration has become a subject of interest in the context of current shortage of medical staff. The exact scale of migration is unknown due to insufficient data. The main goals of the study were to: 1) evaluate the scale of migration intentions among doctors working in Polish hospitals, 2) identify the key predictors and barriers of migration, 3) investigate an association between doctors satisfaction and their tendency to migrate.

Methods:

A quantitative, on-line survey of doctors working in Polish hospitals was conducted between March and June, 2018. 15 cross-nationally distributed hospitals (7 general, 5 specialist, 3 university) were included in the study. The statistical analyses included: associations between the intention to migrate and demographic characteristics as well as work-related variables and overall satisfaction. Simple and multivariable logistic regression analysis was conducted to determine which variables are significant predictors of the intention to migrate.

Results:

1.003 questionnaires were analyzed (response rate: 38%). 273 respondents declared the intention to migrate, including 45 (4.5%) answering 'definitely yes' and 228 (22.7%) 'probably yes'. Men more often considered the option to migrate: 5.2% answered 'definitely yes' and 26.3% 'probably yes' in comparison to 3.7% and 19.0% respectively for females ($p = 0.02$). Childless physicians more often considered the option to migrate than those with kids (9.0% answered 'definitely yes' and 33.1% 'rather yes' vs 2.4% and 17.8%, respectively, $p < 0.001$). Almost 62% of doctors with the intention to migrate considered a temporary stay abroad. 70% of respondents indicated 'leaving family' as main migration barrier.

Conclusions:

The intention to migrate is related to socio-demographic factors (gender, age, marital status, having children) and work-related factors (work experience, working hours). The intention to migrate is negatively related to physician satisfaction.

Key messages:

- The main reasons for the intention to migrate are: higher earnings abroad, better working conditions, the ability to achieve better work-life balance and better training opportunities.
- In Poland a holistic, systemic approach to health workforce planning should be implemented, including monitoring migration trends and improving working conditions.

Career satisfaction of Polish physicians – evidence from a survey study

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Background:

Understanding physician satisfaction and the factors associated are relevant for physicians, their patients and decision makers. We conducted the first national-wide study evaluating the satisfaction of Polish doctors using a multidimensional approach. The aims of this study were to: 1) measure the career satisfaction of physicians working in Polish hospitals, and 2) identify the factors associated with higher levels of career satisfaction.

Methods:

A quantitative, on-line survey among 15 nation-wide distributed Polish hospitals (7 general, 5 specialists, and 3 university) was conducted between March and June 2018. A 17-item questionnaire was used to measure satisfaction on a scales from 1.00 to 6.00, as well as their personal, professional, performance, and inherent satisfaction levels. In total, 1.003 questionnaires were included in the study (response rate = 38%). Unconditional associations and multivariable regressions models were used to evaluate associations between satisfaction levels and their demographic and work-related factors.

Results:

The mean level of physician satisfaction was 4.10 (SD = 0.69). Almost 57% of the doctors reported being from ''somewhat satisfied'' to ''very satisfied'' with their careers; although, only 8.2% reported being satisfied or very satisfied with their career ($\geq$5.00). Doctors reported high levels of inherent satisfaction (mean = 4.4, SD = 0.66) and low levels of personal satisfaction (mean = 3.78, SD = 0.98). Age and work experience were positively and significantly associated with satisfaction.

Conclusions:

The satisfaction of Polish physicians is moderate. Doctors reported higher levels of satisfaction with their interactions with direct supervisor, other physicians, nurses, doctor-patient relationships and the lowest satisfaction with the salary and work-life balance. Gender, numbers of working hours/week; years of work experience and the stage of professional development were the factors associated with higher satisfaction.

Key messages:

- The satisfaction of physicians working in Polish hospitals is moderate. The current shortage of Polish physicians makes their satisfaction especially significant for motivation and retention.
- Physician satisfaction is an important indicator for managers. Attention regarding levels and factors affecting doctors' satisfaction should be one of the key issues of health workforce management.

What doctors and nurses think about the residents' role within the Academic Hospital of Udine?

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Background:

Residents have a significant role in both patient's care and daily ward activities; thus, they should be trained to adhere to hospital procedures and to guarantee best clinical practices and patient's safety. A survey was carried out to assess healthcare workers' (HCWs) opinions about residents' role and performance.

Methods:

Between February and March 2019, a paper-based/online survey was developed and distributed among both doctors (d) and nurses (n) in 17 (10 medical, 7 surgical) wards of Udine Academic Hospital, Italy. 22 Likert Scale questions (1-totally disagree, 5-totally agree) investigated 5 areas: respect of patient safety and privacy, healthcare quality, clinical risk management, role played within medical team, satisfaction concerning training activities planning. Profession, ward (medical/surgical), age and sex were considered as exposures. Descriptive analysis, median(M)±interquartile range, and ordered logistic regressions were performed with Stata software.

Results:

The survey involved 153/785 HCWs' (112/477 nurses and 41/308 doctors). All the units were represented with at least 1 HCWs; answers from both categories were collected in 82% of wards. Data analysis showed that nurses gave lower scores about residents' respect of patient privacy than doctors: patient privacy protection: M(d) = 4±0, M(n) = 4±1, OR(d/n) 2.60, [95%CI, 1.04-6.52]; sensitive data management: M(d) = 4±0, M(n) = 3±1, OR(d/n) 2.97, [95%CI, 1.26-7.02]. The same resulted regarding clinical risk management: patient record management: M(d) = 4±0, M(n) = 3±2, OR(d/n) 13.64 [95%CI 5.30-35.12]; proper hand hygiene: M(d) = 4±1, M(n) = 3±1, OR(d/n) 5.56 [95%CI 2.35-13.17]; incident reporting: M(d) = 4±1, M(n) = 3±2, OR(d/n) 7.05 [95%CI 3.14-15.86].

Conclusions:

Nurses appeared to be more critical than doctors about residents performances in safety and privacy and clinical risk management areas. Reasons behind these different opinions should be investigated in order to improve constantly healthcare's quality.

Key messages:

- Residents hold a key role in healthcare quality, therefore it is significant evaluate their practice regarding patient's safety and privacy.
- Doctors and nurses opinions on residents adherence to hospital procedures in order to guarantee best clinical practices and patient's safety differ significantly.

Nurse's job satisfaction and organization's innovation propensity: organizational climate in Italy

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The concept of job satisfaction positively correlates with many areas investigated by the organizational climate. We focused on nurses' perception towards job satisfaction, as it is relevant regarding nursing care delivery's quality, which is directly linked to patients' safety. Additionally, we provide a measure of the relative importance that each investigated factor has on nurses' job satisfaction and their willingness to recommend the organization they work in to other professionals.

A validated census survey was administered in eight different Italian Regions. A total of 35.156 observations were the object of different analysis preformed using STATA. The questions/statements were Likert scaled from 1 to 5 and were compared to the exposure one ''I am satisfied with my work in my structure/unit''. The research population has an average age of 47 years (females 80.36% ,men are 19.64%) and men are more satisfied than women with their work. There are various factors that impact the area of ''job satisfaction'' with different importance (all statistically significant): feeling of encouragement to react after the experience of a failure (OR 2.23), empowerment over quality job results (OR 1.68), sustainable work pace (OR 1.47), firm's propensity towards innovation (OR 1.36), and experience discomfort while working (OR 1.05). Other factors impacted the area ''I would recommend to a colleague to work in my firm'' with different importance (all statistically significant). These factors include: firm's propensity towards innovation (OR 2.84), feeling of encouragement to react after the experience of a failure (OR 1.43), sustainable work pace (OR 1.32), empowerment over quality job results (OR 1.31), experience discomfort while working (OR 1.02).

The two most important levers, innovation and inclusion can be beneficial to improve workforce experience and care delivery. Managerial implications: data can show which levers to use in order to achieve the most desired goals.

Key messages:

- nurses' perception towards job satisfaction is relevant regarding nursing care delivery's quality, which is directly linked to patients' safety.
- Innovation and inclusion can be beneficial to improve workforce experience and care delivery.

National survey of UK general practice pharmacy services

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Background:

The Clinical Pharmacists in General Practice (CPGP) initiative aims to recruit over 2000 clinical pharmacists in general practice (GP) surgeries in England by 2020. This study aimed to explore the services delivered by all GP pharmacy professionals (GPPPs; pharmacists/pharmacy technicians) across the UK.

Methods:

30-item e-questionnaire was developed using SurveyMonkey platform and piloted during one-to-one cognitive interviews with GPPPs. The survey was distributed via the Primary Care

Pharmacy Association, social media sites, collaborating GP organisations and via emails to participants of CPGP pilot. Three reminders were sent out 1 week apart. University ethics approval was obtained.

Results:

Ninety-one responses were received between November 2018 and March 2019 (89% pharmacists, 52% from CPGP pilot). Participants provided an average of 9 services (95% CI 8.3-9.9). Over 90% of pharmacists delivered medication reviews and over 80% managed patients with polypharmacy. More pharmacists within than outside of the CPGP pilot managed repeat prescribing requests (70% vs. 47%, p = 0.035). Technicians took responsibility for primarily non-clinical services such as service commissioning (90%), management of safety alerts/drug recalls (80%), standard operating procedures (80%) and education & training (80%). Over 40% of GPPPs not providing care home services wished to do so by 2024. Four technicians wanted to be more involved in medication reviews. The main perceived benefits of GP pharmacy services included identifying medicines-related issues (93%), utilisation of pharmacy professionals' skills (93%) and a reduction in medication waste (92%).

Conclusions:

GPPPs provide a range of clinical and non-clinical services which may benefit public health at an individual and healthcare system levels. Pharmacists within the pilot are more likely to deliver repeat prescribing services. Future GP pharmacy landscape will likely include additional services to care homes.

Key messages:

- GPPPs including pharmacy technicians provide clinical and non-clinical services, appropriate to their scope of practice, to benefit patients, healthcare systems and themselves.
- Developing future GP pharmacy services to care homes offers further opportunities to benefit a vulnerable group of patients with long-term illnesses.

Essential knowledge for junior doctors regarding infectious disease control: a modified Delphi study

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Background:

Physicians play an important role in the control of emerging infections and antibiotic resistance. Therefore, all physicians should have sufficient knowledge regarding infectious disease control. It is unknown what knowledge is considered as sufficient; the Dutch National Framework on learning outcomes for medical curricula only offers general terms for this topic. The aim of this study was to determine which learning items are considered as essential knowledge for junior doctors in the Netherlands. The results can support curriculum development regarding infectious disease control.

Methods:

An online two-round Delphi study was performed, involving four expert groups: general practitioners; public health physicians; medical students; and educational coordinators of Dutch universities. Experts were asked to rate sixteen learning items, selected by a literature review. A learning item was considered as essential knowledge if at least 80% consensus was reached on a 5-point Likert scale. Respondents were able to explain their score, to alter the exact wording after each learning item and to add learning items. This input was used for qualitative analysis, in addition to the quantitative scores.

Results:

Both rounds of the study were completed by 27 experts. Six learning items were identified as essential knowledge based on the 80% criterion. By combining qualitative and quantitative data, two additional learning items were identified. Important learning items were mainly focused on understanding and applying basic principles on a case, like identifying measures to prevent spread of infections based on transmission route.

Conclusions:

To our knowledge, this study is the first to identify a list of essential learning items on infectious disease control, which can be used for training purposes. This list supports curriculum development in medical education and strengthens the infrastructure for infectious disease control in the Netherlands by training professionals.

Key messages:

- The Delphi method helped us to identify essential knowledge concerning infectious disease control for junior doctors. The results can be used to increase the knowledge base for this topic.
- Essential knowledge focuses mainly on understanding and applying basic principles to a case. Detailed knowledge is considered less important, provided that physicians know where and when to find it.

9.A. Workshop: Better prison health for better public health

Organised by: EUPHA (IDC), EUPHA (MIG), EUPHA (PHPP)
Chair persons: Ana Carina Ferreira Borges - Denmark, Sofia Ribeiro - Portugal
Contact: lara.tavoschi@unipi.it

According to the latest data, in 2018 about 590,000 people were held in prison on any given day in the EU, and more than double in the entire region. People in prison face multiple and complex health care issues, including a higher prevalence of communicable diseases than the general population. These are likely to be the result of a combination of overlapping, and sometimes interlinked, risk factors for infection, ill-health, and incarceration, such as problem drug use. Incarceration may facilitate the offer of quality health care services to people who are otherwise hard to reach and provide an occasion to target socially deprived groups who often have low level of healthcare access when in the community. Delivering health protection and harm reduction programmes in prisons not only benefits the prison population but also has the potential to reduce the risk of transmission of some infectious diseases in the community, intervening earlier in the natural history of disease. They are also likely also to have a knock-on effect in supporting individuals' reintegration into community life and future health - providing a 'community dividend' to health interventions in prisons. Yet, such health gains may be diminished by suboptimal integration with community services. Continuity of care, or throughcare, between prison and community services is a mainstay of any health care interventions delivered in detention, especially when tackling chronic conditions (e.g. HIV, mental illnesses) or problem drug use.

The World Health Organization (WHO) has long supported the concept of prison health as an inseparable component of public health. This view is enshrined by the principle of Equivalence of Care between prison and community, endorsed by the United Nations in the Nelson Mandela Rules. During the 2019 WHO Prison Health Conference in Helsinki, it was acknowledged that prisons contribute to achieving the UN's Sustainable Development Goals through improving health, reducing health inequalities and provide a fairer and safer society for all. However, a number of challenges hampers the successful implementation of such a concept, including the need for evidence-based decision making, inter-sectoral partnerships and adequate monitoring systems.

This workshop will provide attendees with a comprehensive overview of prison health and the relevance of a multi-sectorial public health approach to frame and address it. The workshop will be structured around three main topics: governance of prison health and current models in Europe; health issues and disease burden in the prison population; current and future perspectives for evidence-based approaches to prison health. The discussion of two case studies, problem drug use and HCV micro-elimination, will create the context for an in-depth analysis of key challenges for prison health implementation, reflecting on aspects such as health needs, equity, multi-disciplinarity, continuity of care, monitoring and community dividend.

Key messages:

- Provide a comprehensive picture of the main challenges of prison health in Europe, the public health issues affecting the prison population and how these relate to community public health systems.
- Reflect on how public health systems need to incorporate prison health into their strategies for reducing inequalities and improving health outcomes of vulnerable and socially deprived populations.

The health of people in prison in Europe

Eamonn O'Moore

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This presentation will explore the rationale behind a public health approach to prison health covering aspects such as the socio-demographic composition of the prison population in Europe, its health status and main health needs, based on the current sources of data. The link between the prison population and the wider community will be analyzed alongside the concept of community dividend, defined as the benefit of prison-related intervention for general population health.

Prison health: governance and monitoring do matter

Daniel Lopez-Acuña

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This presentation will focus on the concept of good governance for prison health, touching upon concepts such as equivalence of care, independent healthcare, standards of care and human rights approaches to healthcare in detained settings. Effective governance and policymaking are supported and fostered by timely and accurate information, however this is largely lacking in European prison systems. Although some steps ahead have been made with the launch of the Health in Prisons European Database (HIPED) in 2016, strengthening health information systems in prison settings is a key priority.

Evidence-based decision making for prison health

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The presentation will provide an overview of the current evidence base on prison health interventions, gaps and challenges for conducting research in prison settings. Evidence based decision making is relevant for prison health, not only in terms of resources allocation, but also in relation to interventions and implementation approaches. Yet scientific literature covering prison health is generally quite limited. Lack of research activities in prison settings may be the results of several factors, partly deriving from structural challenges, and partly from specific features of the prison population. These include supplementary ethical implications, issues related to confidentiality and management of personal information and shortage of health care and other staff trained in conducting research. Low priority attributed to prison health in the sub-national, national or international research agenda may result in less opportunities for funding. Grey literature and programmatic data are regarded as an additional source of information; however accurate or reliable data are rare in Europe. While evidence is limited, there is a growing interest in prison health in Europe. A number of systematic reviews conducted in recent years shed some new light on key aspects of epidemiology and healthcare in prison. At European level various institutions and agencies and national institutions have been engaged in prison health and have produced a number of authoritative documents, including a few guidance documents.

Case study: Drug related problems in prison settings

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Persons in prison generally have poorer physical and mental health and social well-being than their peers in the community, reporting high rates of acute and chronic physical and mental disorders, including, substance use disorders and drug related infectious diseases. People in prison report high prevalence of illicit drug use before and during incarceration and high rates of drug related infections. Acute risks for those using drugs are found in the first period after prison release. Available interventions in prison setting lower life expectancy than their peers in the community. Common risk and social factors are related to poor health and imprisonment and those two components should be addressed in a comprehensive way. The presentation will provide an overview of the last available data on drug use, drug related problems and prevalence of infectious diseases in prison in the European countries.

Case study: HCV micro-elimination in prison

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The presentation will explore the concept of HCV micro-elimination in prison settings end its application in the context of French prisons. Hepatitis C is a chronic pathology of the liver and can significantly affect quality of life, with significant mortality rates. Hepatitis C is of great relevance for prison population due to the overlap of risk factors for both incarceration and HCV infection, including substance use disorders. Historically, HCV interferon-based therapy has not always been offered to people in prison due to various factors, including homelessness, active injecting drug use, and liver disease. With the advent of direct-acting antivirals, almost 100% of patients are experiencing successful HCV treatment, with no medical contra-indication for incarcerated individuals, drug users and/or individuals on opioid substitution treatment. Approaches based on HCV test and treat have proven to be successful in prison settings to achieve micro-elimination and to offer HCV appropriate care to individuals belonging to socially-deprived groups and characterised by limited access to care when in the community. The elimination of hepatitis C in prison, among people who use drugs, also requires effective Harm Reduction programmes, an important tool to prevent re-infections.

9.B. Workshop: Bringing economics, health and migration together: a mutual learning experiment

Organised by: Work group 'Economic arguments in migrant health policy making'
Chair persons: Kayvan Bozorgmehr - Germany
Contact: nora.gottlieb@tu-berlin.de

Acknowledging the role of economic arguments in political discourses and decision-making, researchers have begun to pay more attention to the fiscal implications of different health policy options for migrants. As yet, empirical evidence on economic effects of policy responses to migration and the societal costs or cost-effectiveness of competing strategies to address migrants' health needs is scarce. Methodological challenges such as limited availability and accessibility of decent data often impede the generation of robust evidence. Further, little is known as to how evidence can effectively be moved into policy; e.g., the actual clout of economic arguments in migration policies debates, as opposed to other evidence- or value-based arguments, hitherto remains unclear. In other social policy domains such as educational and labour market integration, economic evaluations have become routine components of policy assessments. And under the title of, e.g., knowledge translation, strategies for the introduction of research evidence into political decision-making processes have been developed. The combination of similar goals and challenges suggests that there are opportunities to build bridges across sectors and disciplines - e.g., public health, social epidemiology, economics, social policy, data science - as well as across research-practice-divides, for the purposes of mutual learning and the joint improvement of research outcomes.

The goal of this workshop is to start such learning processes by bringing together researchers and professionals from different fields, by sharing existing knowledge, and by jointly exploring the following questions:

- What are the thematic intersections, tensions and synergies between the different disciplines? What are common goals and questions? Which kinds of different knowledge complement each other towards those goals?
- Where are options for mutual learning, methodological transfer and/or synthesis? How can they help to overcome current challenges in estimating the costs of divergent migrant health policies?
- What can be learnt from existing knowledge translation strategies as regards the role of research for migrant health policy making?
- What challenges and open questions remain?

The workshop will start with a brief introduction of key concepts and objectives. The first presentation will use three case studies to reflect on the potential of economic evaluation for improving health screening and assessment policies for asylum seekers in Germany. The second presentation will provide input from seminal research on public policy in migration contexts. A third presentation will summarize previous activities and insights of the work group "Economic arguments in migrant health policy making". The following discussion will examine the above noted questions by tapping into the presenters' expertise and the audience's experience. The workshop will be closed with a summary of lessons learnt and directions for future research.

Key messages:

- Economic arguments play a central role in policy-making; but economic analyses of different migrant health policy options are hampered by various methodological challenges and tensions.
- Seminal research in other social policy domains offers potential for mutual learning, toward the end of generating valid economic evidence on the cost-benefits of migrants' greater in-/exclusion.

The potential of economic evaluation studies to improve health screening and assessment policies for asylum seekers in Germany

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This presentation will discuss the potential for conducting economic evaluation studies in the field of migration and health, by focusing on health screening and assessment for newly arriving asylum seekers. We use three economic case studies from Germany to illustrate this potential, reflecting on the benefits of an economic approach, the contribution of modelling studies, the quality and reliability of the underlying data sources and other lessons learnt in the research process. Screening for illness among newly arriving individuals has the potential to expand access to essential services and overcome access barriers, thus improving efficiency by preventing costs of late presentations. This is demonstrated by a recent modelling study on the cost-utility of screening for depression. However, an overview of different screening policies in Germany shows that unnecessary procedures which are not supported by sound scientific evidence may lead to inefficiencies in excess of €3.1 million, which could be more effectively invested in other parts of the health system. Finally, efficiency gains could be made by assessing who benefits most from screening, and designing targeted screening approaches for these groups, as in the case of targeted screening for active tuberculosis by country of origin. We will end the presentation by reflecting on the potential role for economic evaluations health policy-making, and the challenges of communicating and translating the nuances of economic evidence into practice.

Effects of non-health-targeted policies on migrant health

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This presentation will commence with a brief overview of the field of migration and health with the purpose of contextualizing the need for more policy-oriented research in this area, in so far as policy is a crucial -yet still overlooked- social determinant of health. In this context, we will present the main findings of a systematic review and meta-analysis recently published in the Lancet Global Health which looks at the effects of entry and integration policies on migrant health. The findings will, in turn, serve as a starting point to discuss how migration issues in general, and migration and health in particular, should be framed in relation to economic and human rights. Acknowledging the role of economic arguments in decision making, the presentation will end with a general reflection about the invisible contributions of migrants to wealth creation in a global economy and the difficulties of estimating such contributions.

Ethics, economics and migration: intersections, synergies and tensions

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The presentation will provide food for thought on the relationships between value-based discussions and economic evaluations of healthcare provision for marginalized migrant groups along two different lines of thought. First, while economic analyses are often interpreted as objective and neutral pieces of evidence, it can be argued that every economic model and analysis has its starting point in specific ethical values that are set as basic assumptions. This, in turn, has inevitable impacts on possible results and conclusions. The presentation will use examples to illustrate the value-based foundations of economic analyses in migrant healthcare; and it will propose options for the more explicit reflection of value-based assumptions in economic evaluations. Secondly, the presentation will reflect on existing research on the rationales shaping political decision-making processes in the field of migrant healthcare. In specific, it will examine the concepts of ‘‘health-related deservingness’’ and of ‘‘political decisions’’, which both postulate that eventually values tip the scales in political decisions on migrant healthcare; and it will discuss the meaning of these concepts for the role of economic evidence in policy-making processes. In doing so, the presentation will relate back to the workshop’s overarching question on how to build synergies and bridges between migration and health research, economic analysis, and policy making to overcome inherent tensions.

9.C. Round table: Online anti-vaccination movements: the role of social media in public health communications

Organised by: EUPHA (HP), DPH, EUPHA (IDC)
Chair persons: Luís Saboga-Nunes - EUPHA (HP), Patty Kostkova - UK
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Digital health has revolutionised healthcare, with implications for understanding public reaction to health emergencies and interventions. Social media provides a space where like-minded people can share interests and concerns in real-time, regardless of their location. This can be a force for good, as platforms like Twitter can spread correct information about outbreaks, for example in the 2009 swine flu pandemic. However, social media can also disseminate incorrect information or deliberately spread misinformation leading to adverse public health sentiment and outcomes. The current issues around trust in vaccines is the best-known example. Vaccine hesitancy, traditionally linked to issues of trust, misinformation and prior beliefs, has been increasingly fueled by influential groups on social media and the Internet. Ultimately, anti-vaccination movements have the potential to lead to outbreaks of vaccine-preventable diseases, especially if refusal is concentrated locally, creating vulnerable populations. For example, 2018-19 saw a large increase in incidence of measles in the US and Europe (where cases tripled from 2017), two regions where the disease was already or almost eliminated. In 2019, the World Health Organisation listed anti-vaccination movements as one of the top 10 threats to global public health. HPV vaccination is another example of the impact of anti-vaccination movements. As viral videos originating on YouTube spread across social networks, uptake has tumbled in a number of countries, with Japan, Denmark, Colombia and Ireland being badly hit. In Japan, the government came under sufficient pressure that they de-recommended HPV vaccine, seeing an 80% uptake rate fall below 1% in 2014. There have been reports of successful interventions by national governments. A recent campaign run by the HPV Alliance (a coalition of some 35 private companies, charities and public institutions) in Ireland has seen rates below 40% back up to a national average of 75%. A combination of hard-hitting personal testimonials, social media and traditional media promoted the HPV vaccine. Despite this, systematic engagement and supranational strategies are still in the early stages of being formulated. As misleading information spread through social media and digital networks has undesirable impact on attitudes to vaccination (and uptake rates), urgent actions are required. Analysis and visualisation techniques mining data streams from social media platforms, such as Twitter, Youtube enable real-time understanding of vaccine sentiments and information flows. Through identification of key influencers and flashpoints in articles about vaccination going viral, targeted public health responses could be developed. This roundtable discussion will showcase different ways in which media and social networks, accessible in real-time provide an opportunity for detecting a change in public confidence in vaccines, for identifying users and rumors and for assessing potential impact in order to know how to best respond.

Key messages:

- Social media has significantly enhanced our understanding of anti-vaccination movements and potential impact on public health attitudes and behaviors regarding vaccination.
- Innovative methods of analysing social media data, from digital health, data science and computer science, have an important role in developing health promotions to counter anti-vaccination movements.

Role of Social Media in vaccination debate about HPV: the VAC Medi+Board study

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Whilst it has long been known that anti-vaccination sentiment is widely disseminated through digital networks, 2019 has seen seismic shifts in the landscape. As viral videos originating on Youtube spread across social networks, HPV vaccine uptake tumbled in a number of countries. In Japan, the government came under sufficient pressure that they de-recommended HPV vaccine, seeing a 70% uptake rate in 2013 fall below 1%. However, there have been some reports of successful interventions - a recent campaign run by the HPV Alliance in Ireland has seen a rate back up to a national average of around 75%. A combination of hard-hitting personal testimonials, social media and traditional media looked to promote the HPV vaccine. Social media platforms such as Twitter enable near real-time understandings of vaccine sentiment and information flows at scale. VAC Medi+Board project developed an innovative approach for Twitter data collection, integration, analysis and visualisation to support rapid responses through identifying key influencers and flashpoints in articles about vaccination going viral. This pilot study evaluated the debate about HPV on Twitter in a period of several month and developed methods for analysis and visualisation of the content, key influencers, information diffusion throughout the network and size of audience. Through complex network analysis, VAC Medi+Board piloted identification of individuals for targeted public health interventions to combat misinformation. In this talk, we will present the VAC Medi+Board HPV study and explore the challenges and opportunities that social media can provide for public health policymakers.

Exploring online anti-vaccination movements: the role of social media in public health communications and reporting

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Vaccination against Human Papilloma Virus (HPV) was successfully introduced in the Danish childhood vaccination program in 2009 for girls aged 12 with coverage reaching approximately 90%. However, media attention focusing on vaccine safety resulted in a rapid drop in vaccination coverage from 2015. In May 2017, a national campaign ‘‘Stop HPV - stop cervical cancer’’ with aim to regain trust in the official HPV vaccine recommendation and to increase vaccination coverage, was launched. The primary target group of the campaign are mothers in doubt whether to HPV vaccinate their daughter. One of the main elements of the campaign is the social media strategy which includes a Facebook (FB) page ‘‘Stop HPV - stop cervical cancer’’. New content is made for the page one or twice weekly with a wide range of different post styles used. The FB page is staffed throughout the week and every comment made on the FB page personally answered by the staff. The communication strategy used for the campaign is ‘‘heart-brain’’ with a strategy of communicating ‘‘brain’’ facts about safety and effectiveness of the vaccine while on the other hand telling narrative ‘‘heart’’ stories, such as personal stories of women with cervical cancer. The strategy is in line with recommendations from World Health Organization (WHO) who acknowledge health communication related to vaccines is not only about telling facts, but also about eliciting emotions, creating trust and ensuring genuine understanding by the target group. Communicating on FB about the Childhood vaccination programme has not been used by the Danish Authorities before and there has been a keen interest to learn from the campaign initiative. To quantify and qualify the interaction on Facebook, engagement rates and sentiment analysis to the different types of FB posts have been evaluated and focus groups used to describe the preferred communication style. Data from the evaluation and the impact of the campaign will be presented at the workshop.

Countering anti-vaccination trends and changing online opinion

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We reported the case study of Professor Roberto Burioni, a medical microbiologist and virologist who, in 2015, started a personal social media campaign to contrast anti-vaccinists, using Facebook and other social media to disseminate the science behind vaccines and disseminating scientific data to refute rumors about their dangers. With over 500,000 people following his Facebook profile, Burioni has become a popular role model and influencer in the field of vaccines, openly criticizing vaccines’ refusers and fighting fake news. He used a rather aggressive tone, claiming they are ignorant and that ‘‘science is not a matter of democracy’’. Although it is methodologically difficult to quantitatively estimate the so-called ‘Burioni effect’ in influencing vaccines’ confidence, we report a drastic rebalance of the number of Italian social media pages supporting vaccines after 2015 suggesting his action on the web has been successful. In fact in 2015 Fakebook pages with the highest amount of contacts were anti-vax, while in 2018 pages with the highest number of contacts were those of supporting the scientific rationale of immunization. We are studying this phenomenon inside a project considering areas of Italy with high prevalence of no-vaxxers and hesitants.

The role of health literacy as a public health strategy to counter act the anti-vaccination movement in the web

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During the last three years information systems in Europe have shown an increase of cases related to certain diseases considered under control due to vaccination. In April 2017 ECDC reported 9 fatalities by measles and rubella outbreaks. More than 1500 cases of measles in 14 countries were reported in January and February (one of the worst outbreaks in recent years). In the first semester of 2018 in Europe 41 thousand more new cases were registered (17.073 more than in 2017). In Portugal during the first 4 months (2017) there were more cases of measles than during the last 10 years, and in 2018 new cases registered indicated a 5 times increase (162 cases), when compared with the previous year (2017). In Germany, 18% less vaccines were sold (significant drop between 2015 and 2016). It is essential to understand how health literacy is shaping social representations built around the anti-vax movement and the role of the media in their building process (e.g. Facebook / study case Portuguese community). We conducted a content analysis of Facebook pages related to ‘vaccines’ in Portuguese show that the first 2 hits are anti-vax pages with more than 4k likes while the first pro-vax Facebook page (from a nurse) has only one like. In the fourth rank with 43 likes, comes the first institutional Facebook pro-vax page. When considering health literacy of those involved in the dissemination of these messages, a clear mandate to public health stakeholders to become more engaged emerges as an urgent need. Public health is not visible on the web with the same intensity as anti-vax movements. A public health strategy should be based in a pro-active approach instead of being reactive to negative opinions about vaccinations.

9.D. Skills building seminar: Young policy voices for our future - building intergenerational bridges

Organised by: European Health Forum Gastein, EUPHA (PHPP)
Chair persons: Sara Mc Quinn - EUPHAnxt Co-ordinator, Damir Ivankovic - Netherlands
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Building bridges in policymaking is a vital concept to facilitate intersectoral collaboration and bring about change in many areas such as health workforce skill-mix, social and commercial determinants of health, or urgent health and environmental challenges with input from a wide spectrum of stakeholders. Yet, beyond breaking up horizontal silos, another issue urgently needs to be addressed: strengthening intergenerational bridges within the health policy arena. While valuing the younger generation's new ways of communicating and sharing innovative knowledge, systems which encourage intergenerational partnerships and foster a reciprocal exchange need to be facilitated. This will allow for young voices to be increasingly heard and considered in policymaking. Though young professionals in public health and beyond are ideally placed to move this collaboration forward with a perspective that is passionate, inquisitive, dedicated and unbound by paths already taken, these often hierarchical systems usually offer limited incentive and room for experimentation and innovation.

The objective of this interactive workshop is to highlight the need for incentivising intergenerational relations in policymaking and for young voices to be heard. We hope to inspire a fruitful intergenerational debate by presenting three case studies that display effective cross-generational work.

These insights will be followed by a participatory format allowing the participants to jointly consider and develop concrete suggestions on how increased intergenerational cooperation in the policymaking arena could be reached for the benefit of all, and to leave the room with innovative ideas to take home to implement in their work environments. The debate will not shy away from also critically reflecting the benefit of youth involvement and whether ''young voices'' can even be seen as one entity.

The three international cases showcased in this workshop will highlight how alternative non-hierarchical intergenerational models can be organised without threatening existing systems and enabling system transformation. Each case will focus on one of the headings:

1. Unexpected learning from intergenerational collaboration
2. Forming alliances for a stronger youth voice
3. Removing barriers for true intergenerational connection

The presentations will be followed by active audience involvement using the World Café, involving topic champions and allowing for participants to share their own experience, connect to current and future needs, and jointly develop ideas for action to be taken at different levels. The workshop will conclude with a 15 min plenary, where participants will share insights from their conversations. A graphic harvest will take place during the workshop to visually capture the spirit of the conversations, support knowledge sharing and inspire action.

Key messages:

- Developing alternative non-hierarchical inter-generational models.
- Building intergenerational bridges as a vital concept for future policymaking.

A fresh look at national health policy issues
Damiet Onderstal

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Young Forum Gastein (YFG), the young professionals' network of the European Health Forum Gastein (EHFG), enables promising young health professionals to become a part of an inspiring network of almost 500 members working in different positions all over Europe. In recent years, activities throughout the year have been focussed on workshops bringing together high-level national policymakers and Young Gasteiners (YGers) to discuss specific national health systems challenges in Austria and in Croatia. These formats have allowed a fresh look at issues senior policy makers may have developed a blind spot for, have resulted in eye-opening learning on both sides of the spectrum and have led to concrete recommendations for major health policy issues.

Presenters: Sinisa Varga, former Minister of Health, Croatia
Damiet Onderstal, Ministry of Health, Welfare and Sports, The Hague, Netherlands

For the benefit of young professional networks, please see also: https://academic.oup.com/eurpub/article/24/5/704/2837380

Youth Alliance - a new model for health policy development
Sherria Ayuandini

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The work of the ''Youth Alliance'' (as part of the EU funded CO-CREATE project) introduces a new model for health policy development which sees young people and health policy experts from academia coalesce to form a 'Youth Alliance' considering the broader social and commercial environments which result in childhood obesity and other health problems, and what this means for policy development. The CO-CREATE project is a partnership between 14 European health and academic institutions and civil societies in five countries. The project will demonstrate the democratic engagement of youth in facilitating intergenerational and interorganisational cooperation.

Presenters: Christian Bröer and Sherria Ayuandini, University of Amsterdam

Young health leaders shape their future policies
Katarína Gatialová

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The European Health Parliament (EHP) is a movement connecting and empowering the next generation of European health leaders to rethink EU health policies. The initiative connects promising young professionals and challenges them to develop solutions for European health policy that are both innovative and actionable. The EHP answers Europe's need for fresh ideas in health and believes that the solutions required must come from young European health leaders who influence the policies that will ultimately concern their generation as they become senior decision-makers. Participants work together for six months to develop policy recommendations that address today's most pressing European health issues which are picked in cooperation with the European Commission.

9.E. Workshop: The changing politics of ageing and welfare state: Connecting politics with realities

Organised by: Observatory
Chair persons: Scott Greer - USA, Jonathan Cylus - UK
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Societies are ageing, in Europe and elsewhere. This is an effectively unprecedented development in human history and one that many think could pose a real threat to welfare states' political bases and sustainability. In some countries this has been taken as evidence that the welfare state will become unsustainable, and in others that the welfare state has been turned to serve the interests of the elderly at the expense of the young.

The purpose of this workshop is to present the new evidence on how and why political systems respond to the challenges of ageing and health. Research indicates that the extent that population ageing creates difficulties for economies, public finances, and health systems is complex and, importantly, conditional on a host of modifiable factors. Furthermore, a focus on divides between generations distracts us from other, important, inequalities within generations. Not only does science have a part to play in busting many ageing-related 'myths', but there is also a key role for policy intervention.

This workshop, based on findings from the European Observatory's ''Economics of Healthy and Active Ageing'' study brings together research on why population ageing is often (erroneously) viewed cataclysmically from a health financing perspective, and reviews relevant policies that may improve health system financial sustainability. The workshop will have 5 presentations followed by debate on why countries may or may not prioritize policies that support the health of older people. Presentation #1 sets out the problems and broad trends on costs and projections associated with older people and ageing societies, drawing on the other parts of the series, as well as intergenerational transfers. It then lays out the framework for the rest of the presentations.

Presentation #2 expands on the first presentation by looking at country contexts. The focus will be on the politics and consequences of ageing in southern and central-eastern Europe. Having established the problem, Presentation #3 will determine how different publics understand and frame ageing and health, what priorities do publics identify, and why. Presentation #4 will look at political manifestos and voting patterns to see how/if public opinions are translating into changes in government that want to tear down the welfare state and blame it on ageing. Lastly, Presentation #5 will address the core issue obscured by intergenerational accounting: to what extent are the politics of ageing actually being shaped by, and reproducing, social inequalities?

Debate including audience members will be facilitated by an expert from the Observatory.

Key messages:

- Excessive focus on the costs of ageing is a distraction from real inequalities and an obstacle to better policy.
- Institutional and policy responses play a crucial role in determining how health systems, economies and societies more broadly are affected by population ageing.

Busting the myth of the 'greedy elderly'

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Background:

The politics of ageing are both personal, involving judgements about specific family members as well as broad social groups. This chapter evaluates the argument that governments implement packages of policies that are favorable to the elderly, but that are societally sub-optimal, because of political pressure from the elderly. It begins by laying out the core premises of the ''greedy geezer'' narrative: because pension transfers, high-cost medical care, and policies that protect transferable assets like housing are highly salient to the elderly and their advocates, intense preferences for these types of policies communicated to politicians and policy-makers will eventually crowd out other, more societally-optimal policies.

Methods:

Looking at public opinion data on ageing, intergenerational transfers, and the welfare state this chapter wants to understand both how different publics understand and frame ageing and health as well as what priorities these publics identify, and why?

Results:

The elderly and their organized representatives (e.g. pensioner parties, pensioner unions, and advocacy groups) in some contexts do push for policies that are ''greedy'' in the sense of being beneficial for the elderly or their own children, but not for society as a whole. However, this phenomenon is far from universal: It is especially pronounced in the US and the UK, but much less so in other national contexts. Moreover, the policy packages adopted by national governments are generally motivated by concerns other than appeasing the elderly.

Conclusions:

Characterizing the elderly as uniformly ''greedy'' obscures the fact that inequality among the elderly means that many need more support than they actually receive.

Taking the high road: The politics of win-win approaches

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Background:

Policy is rarely a direct reflection of public opinion. Party systems and patterns of political competition shape the way issues are presented in politics and the incentive politicians have to act on them. Despite the alleged pro-elderly bias of many political institutions in European countries, and the potential for some types of spending on the elderly to provide broader social benefits, policymakers often do not introduce the most effective policies for supporting healthy ageing.

Methods:

Political manifestos and voting patterns will be examined in order to determine how/if public opinions are translating into changes in government that want to tear down the welfare state and blame it on ageing.

Results:

Although it is true that public spending (e.g. pensions, health) on the elderly remains more extensive and insulated from cuts than other forms of spending, second, in many (not all) countries policies that would help the elderly age in a healthy way are to introduced. These latter policies, which include spending on the poorest elderly, ensuring access to high quality home care and other services, and investing in declining regions where elderly people are often disproportionately likely to live, often are limited.

Conclusions:

Where cross-class/cross-generational coalitions come together to address gender inequities (among the elderly and working age), and develop public services, high road models are possible. Where conflict is framed largely inter-generationally, the well-being of pensioners may be preserved in the short-run, but less investment in the long-run infrastructure of healthy ageing emerges. To make these arguments, the paper shows descriptive patterns of policy developments from the 1980s to today, combined with a brief case study of the UK.

The real inequalities

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Background:

The 'greedy geezer' and 'poor elderly' narratives both assume that the older population are homogeneous and that the experiences of older people are universal. This ignores the fact that there are significant health inequalities (i) amongst the older population and (ii) in terms of who gets to be 'old' (and for how long). Further, the focus on intergenerational inequality is a deliberate distraction from the far more significant health inequalities that exist in terms of gender, geography, ethnicity, socio-economic status etc across the whole population - regardless of age.

Methods:

Health inequalities amongst the older population and inequalities in terms of who gets to be 'old' will be examined through health inequalities across the population by gender, geography, ethnicity, socio-economic status etc.

Results:

Given, for example, that total intergenerational transfers incorporating private transfers are from the older to the younger, it is quite possible that if we reduce public intergenerational transfers (working age to older) then all we are doing is increasing inherited inequality.

Conclusions:

Policy focused on 'intergenerational equity' and 'intergenerational accounting' will often exacerbate inequalities within generations, to the benefit of the wealthiest and the detriment of much of the population. Win-win solutions only emerge if there is a focus on addressing the many and more profound health inequalities that cross-cut generations.

The politics of bad policy: Why don't governments pick win-wins?

Michelle Falkenbach

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Background:

Why, fundamentally, are the politics and public opinion of ageing and health so badly mis-aligned with facts about the costs of ageing societies? The literature has for decades characteristically divided between an old politics of expansion and the post-1990s new politics of recalibration and austerity. The problem for understanding the politcs of health and ageint is that a mix is also plausible: recalibration with an element of expansion in long term care. This mix then leads to a further thought: When do governments expand mature welfare states to deal with risks not covered in traditional male-wage-earner welfare programs?

Methods:

A narrative review was conducted on the thin literature available attempting to answer the question as to why governments are not picking win-wins (e.g. keep people healthy so they can actually retire at their formal retirement ages, or ensure informal care is valued).

Results:

There were a handful of hypotheses identified in the review, including: the "old politics" of welfare expansion where "credit claiming" is used for highly popular initiatives, the "new politics of the welfare state" also known as the "blame avoidance thesis" where politicians will attempt to avoid blame by making cuts less transparent, "blame buffering" and the "median voter theory" as well as "negative policy feedback".

Conclusions:

Mature welfare states are not expanding. In fact, the theories on the politics of ageing are focused on how welfare states are retrenching or reforming, as they call it. Blame avoidance and blame buffering are the most common explanations for decisions, often counterproductive ones, about how to recalibrate welfare states in the face of ageing.

9.F. Workshop: Twins: a powerful study design to examine the role of genetics and environment for work incapacity

Organised by: Karolinska Institutet
Chair persons: Pia Svedberg - Sweden
Contact: pia.svedberg@ki.se

Twin design is an important tool to analyze the role of genetic and environmental factors, and to better understand causal mechanisms in public health research. Twin studies have reliably shown that genetic factors are important not only for physiological traits but also for psychological and health behavioral traits as well as for health-related work incapacity in terms of sick leave and disability pension.

As many countries face an aging workforce, it is becoming ever more important to understand the underlying causes of work incapacity across the entire working life. In the past decade, twin data in combination with national register data have been used to deepen our understanding of the role of genetic and environmental influences on the complex processes of sick leave and disability pension. The aim of this workshop is to present and discuss methods and results of studies based on the large Swedish, Finnish and Norwegian twin cohorts.

Linear structural equations are intensively utilized in modern methods of twin studies. A variety of models are available to answer different research questions, such as the dynamics behind associations between traits and developmental processes in longitudinal designs - models also applicable in health at work and social security. Further, analyzing twin pairs discordant for an outcome or risk factor (co-twin control) provides a unique possibility to control for familial (genetic and shared environmental) factors, since cases and controls are matched optimally being twins. Findings based on twin cohorts suggest that familial factors are relevant to many risk factors as well as for work incapacity. By controlling for these unobserved confounding factors, the co-twin control design may provide more accurate estimates of risk factors for work incapacity and complement the epidemiological findings of unrelated subjects. Based on population-based twin cohort studies with long follow-up, indications also exist that familial confounding may have different roles in the associations between risk factors and work incapacity. For example, in regard to various disability pension diagnosis groups and depending on study designs (one vs. two time points, longer vs. shorter follow-up etc.).

Results from prospective studies on various risk factors, including adolescents' mental health problems, for future sick leave and disability pension will be presented. Another presentation focuses on the stability and change in genetic and environmental factors influencing work incapacity from age 18 until retirement and the likelihood of causality between educational attainment, lifestyle and work incapacity. Finally, results on adverse outcomes of sick leave due to mental disorders using an open cohort design adjusting for familial factors will be presented.

During the time of rapid development in molecular genetics, the twin study design has maintained its importance and will continue to cast light on different aspects of work incapacity.

Key messages:

- Twin design offers a unique tool in public health research to examine and control for familial (genetic and shared environmental) factors.

- Genetic factors seem to play an important role in understanding the complex causes of work incapacity in terms of sick leave and disability pension.

Studies from the Norwegian Twin Registry on risk factors for health related work incapacity

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Background:

For the past decade, researchers from the Nordic countries have taken the advantage of their large twin cohorts and reliable official registries to deepen our understanding of sick leave and disability pension. This presentation will give a brief summary of studies based on data from The Norwegian Twin Registry (NTR).

Methods:

Monozygotic twins develop from one fertilized egg cell and are genetically identical, while dizygotic twins are the result of two fertilized egg cells and share, as ordinary siblings, in average 50% of their segregating genes. With data from large cohorts of twins reared together, it is possible to calculate the proportion of variance in an outcome that stems from genetic, shared and non-shared environmental factors respectively. Furthermore, when exploring the contribution from measured risk factors on specific outcomes, adjustment for unmeasured confounders (genes and shared environment) can bring us closer to determine causality in epidemiological studies. Both methods were applied in our studies. NTR now includes data from about 30 000 twins, but until recently we focused on a subsample of about 8 000 young adults (born 1967-1979). Data from questionnaires and interviews were linked to registries on sick leave and disability pension.

Results:

In line with previous studies, we found that the liability to sick leave and disability pensioning, as well as the transition from the former to the latter, was strongly to moderately influenced by genetic factors. We found no evidence for ''social transmission'', e.g. that environmental factors shared by the twins contributed to these outcomes. Further details and results from studies on measured risk factors, with emphasize on mental health, will be presented at the conference.

Conclusions:

Twin studies cast light on different aspects of work incapacity, including reducing stigma such as those associated with theories of social transmission of health related benefits.

Risk factors of disability pensions – what will twin studies from Finland and Sweden add?

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Background:

Finland and Sweden have been forerunners to investigate social insurance in twin cohorts. Using twin cohorts to research disability pension (DP) has provided a unique possibility to control for genetic and environmental factors (i.e. familial confounding). This is important, since genetics is known to play an important role in many chronic diseases for DP such as low back pain (30%), depression (40%) and a moderate (35-48 %) role in DP. Furthermore, familial confounding can be expected to affect many risk factors, i.e. health and behavior related factors and is therefore of interest in the associations between risk factors and DP.

Methods:

In twin cohort studies for DP, first, the twins are treated as singletons, and the effect of risk factors on the incidence of DP is analyzed by applying regression models. Second, analyzing twin pairs discordant for both outcome (DP) and risk factors provides a possibility to control for familial confounding. This co-twin-control design is a unique tool, includes investigation whether twins who are exposed to a specific factor of interest more often are granted a DP than their non-exposed co-twins.

Results:

Co-twin control design allows adjustment for familial confounding. Therefore, the results based on discordant twin pairs add to the epidemiological findings of unrelated subjects. Based on population-based twin cohort studies with long follow-up, indications exist that the familial confounding may have different role in the association between risk factors and DP depending on risk factors of interest but also on diagnosis group for DP.

Conclusions:

Evidently the underlying medical condition is important, and the risk factors vary between diagnosis groups of DP. However, also familial factors play a role in process of sickness absence, in the transition from sickness absence to DP, and for DP. Therefore, need for early identification of risk factors and tailored interventions of prevention is emerged for public health.

Mental health in childhood and adolescence in association to sickness absence and disability pension

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Background:

A large amount of studies have previously reported associations between sociodemographic, socioeconomic, health- and work-related factors and future sickness absence (SA) or disability pension (DP). However, the knowledge is still scarce regarding the associations between mental health problems and disorders during childhood and adolescence in association to future work incapacity, and regarding the role of familial influences on the associations.

Methods:

The studies were based on 2,690 twins born 1985-1986 in Sweden who participated in the Twin Study of CHild and Adolescent Development (TCHAD). The twins were followed repeatedly at ages of 8-9, 13-14, 16-17, and 19-20 years. The presence of depressive, anxiety, rule-breaking, and social phobia symptoms were assessed through self-reports. SA and DP data were obtained from national registries. Group-based trajectory, logistic regression and Cox proportional regression analyses were applied.

Results:

More than half of the twins that were on SA or granted DP had stable moderate levels of the mental health symptoms during adolescence. Cox regression analyses showed that rule-breaking behavior was associated with a higher risk for SA with the highest HR of 1.12 (95% CI 1.05-1.19) at age of 8-9 years. High levels of anxious and depressive symptoms were associated with DP despite age at symptom assessment. The associations attenuated slightly when familial factors were taken into account. The association between social phobia and SA was to some extent explained by sex and parental education except for when social phobia was measured at ages 19-20 years (OR 1.22, 95% CI 1.10-1.34). The results changed slightly when further adjusting for familial factors.

Conclusions:

Familial factors had no major importance for the studied associations. Hence, early life public health interventions to improve mental health might reduce the risk of future work incapacity in young adulthood.

Education, lifestyle and life course differences in level of work incapacity – genes and environment

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Background:

As many countries face an aging workforce, it is becoming ever more relevant to understand the underlying causes of work incapacity across the entire working age. Previous twin studies have demonstrated that work incapacity is influenced by genetic as well as environmental factors. Furthermore, educational attainment and lifestyle behaviors are relatively stable from early adulthood and are associated with work incapacity. This association may be confounded by unobserved factors - both genetic and environmental. In two separate twin studies, we examine 1) the stability and change in genetic and environmental factors influencing work incapacity from age 18 until retirement, and sex differences in these effects, and 2) the associations and likelihood of causality between educational attainment, lifestyle and sickness absence.

Methods:

study 1: A population-based sample of 28,759 twins were linked to high quality national registry data and followed for up to 23 years. We measured work incapacity as the total proportion of potential workdays lost due to sickness absence, rehabilitation, and disability benefits.

study 2: Data from a subsample of 8,806 twins who completed health questionnaires were linked to registry data on sickness absence and educational attainment. Self-reported lifestyle behaviors were smoking, physical activity and BMI (height and weight).

Results:

study 1: Structural equation modeling indicated moderate genetic influences on work incapacity throughout life in both men and women, with a high degree of genetic stability from young to old adulthood.

study 2: Preliminary regression analyses indicated that genetic factors largely confound the associations between educational attainment, lifestyle and sickness absence.

Conclusions:

Genetic factors seem to be a major issue in understanding causes of work incapacity. Largely the same genetic factors influence individual differences in work incapacity throughout working age.

Adverse outcomes of sick leave due to mental disorders: prospective studies of discordant twin pairs

Lisa Mather

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Background:

Sick leave due to mental disorders is common. We investigated if sick leave due to mental disorders increased the risk of reoccurring sick leave, disability pension, unemployment, in- and specialized outpatient care, and mortality, using a co-twin design, taking genetics and shared environment (familial factors) into account.

Methods:

The register-based open cohort studies contained twin pairs 18-64 years old discordant for sick leave due to a mental disorder. First, 2202 pairs were followed up to 8 years from the end of the sick leave spell for reoccurring sick leave, disability pension and unemployment. Second, 4979 twin pairs were followed up to 9 years from the beginning of the sick leave spell for death, inpatient and specialized outpatient care. Conditional Cox proportional hazard regression, adjusting for familial factors, was used to calculate Hazard Ratios (HR) with 95% Confidence Intervals (CI).

Results:

Those with sick leave due to mental disorders had 3.64 (CI: 3.24-4.08) times higher risk of reoccurring sick leave the first two years and the first year, they had 12.24 (CI: 8.11-18.46) times the risk for disability pension. The risk of unemployment was 1.99 (CI: 1.72-2.31). The HR for inpatient care was 1.90 (CI: 1.66-2.17) among men but lower among women. For men the risk of outpatient care was higher the first 2 years (HR: 2.08, CI: 1.87-2.31), and for women the HR was 1.57 (CI: 1.47-1.68) for the whole study time. There was an increased risk of death among men (HR: 2.91, CI: 1.70-4.99), but not among women.

Conclusions:

By adjusting for familial factors we could investigate if the same factors that predispose to sick leave due to mental disorders also predispose to morbidity, mortality and unemployment and hence explain the associations. But, sick leave due to mental disorders was associated with a higher risk of work related and health outcomes, independent of familial factors. The risks varied over time and differed among women and men.

9.G. Skills building seminar: Capacity-building for implementing integrated care

Organised by: Scottish Government, EUPHA (CHR), Chair persons: Iveta Nagyova - EUPHA (CHR), Andrea Pavlickova - UK
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Rationale:

The significance of integrated care as a means for improving health outcomes and effectiveness and sustainability of health and care systems is widely acknowledged. Integrated care is a central element in many on-going or planned healthcare system reforms, however, the main challenge remains of how to build relevant capacity and know-how for the successful implementation of integrated care. Capacity-building is both the foundation and aspiration of SCIROCCO Exchange EU Health Programme funded project. The project aims to facilitate access to tailored, evidence-based support and improvement planning by recognising different staring points, or levels of maturity of healthcare systems in Europe.

Objectives:

This round table aims to explore different levels of local maturity and capacity to implement integrated care in three European regions; Basque Country, Flanders and Poland. The workshop will be a practical opportunity to dispute what actions and activities should be prioritised in these regions in order to improve their capacities for the adoption and scaling-up of integrated care. The workshop also aims to raise awareness about different levels and mechanisms of capacity-building support for integrated care that exists at European level. In particular, the workshop will feature SCIROCCO Exchange Knowledge Management Hub as one of the capacity-building tools and its application in the real-life settings.

Added value:

Sharing learning more widely will help to build sustainable integrated care systems and tackle the risks of people working in isolation or re-inventing the wheel.

Format of the workshop:

The workshop will consist of two keynote presentations, providing necessary background into the existing European policies, programmes and initiatives to support the adoption and scaling-up of integrated care. The introductory presentations will then follow by three snapshot presentations of 5 minutes featuring the main findings on the maturity and capacity of three European regions to implement integrated care. In the second part of the meeting, the participants will have the opportunity to discuss interactively with the representatives of the regions the use of SCIROCCO Exchange Knowledge Management Hub in the real-life settings, its added value and implications of the outcomes for future actions and improvement planning. The ultimate objective is to stimulate the discussion and knowledge on how to address the existing difficulties in implementing integrated care.

Key messages:

- Integrated care is considered as fundamental element driving transformation of healthcare systems. The challenge remains how to address different levels of capacities to implement integrated care.
- SCIROCCO Exchange can facilitate the access to capacity-building support that is needed for transition and/or improvement of existing systems for the adoption and scaling-up of integrated care.

EU level actions and instruments to support the implementation of integrated care

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Issue/Problem:

The significance of integrated care as a means for improving health outcomes and the effectiveness and sustainability of health and care systems is acknowledged in several policies at national and EU level, for example: the European Commission's Communication on effective, accessible and resilient health systems, the 2017 European Semester: Communication on Country Reports, the Joint Report on Health Care and Long-Term Care Systems and Fiscal Sustainability by the European Commission and the Economic Policy Committee, the Companion Report 2017 of the State of Health in the EU and the most recent Commission Communication on the digital transformation of health and care in the Digital Single Market. As such, there may be no doubt about whether one needs to transform the health and care model and move to integrate care, but the question is how to design and implement integrated care successfully. One pre-condition for this to happen, is for health authorities to have adequate capacity and relevant know-how.

Results:

The European Commission aims at assisting Member State authorities at national, regional and local levels to fulfil this pre-condition and proceed with their health system reforms. There is a number of instruments, initiatives and funding support to raise the capacity of national and regional healthcare authorities to adopt and scale up integrated care.

Lessons:

There is an increasing demand and need to provide support and assistance to Member states to drive the transformation of healthcare systems towards more coordinated, integrated and sustainable healthcare systems.

SCIROCCO Exchange - Capacity-building support for integrated care

Andrea Pavlickova

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Issue/Problem:

Integrated care is a recognised solution to address the challenge of ageing population. Hence, it is important to commit to opportunities that increase the readiness and capacity of regions to implement integrated care. Knowledge transfer has been greatly recognised as an effective enabler of capacity-building support. However, effective knowledge transfer and capacity-building support requires dedicated support and infrastructure to ensure that the flow of appropriate information and knowledge between adopting and transferring entities is tailored to the local context and maturity of the particular healthcare system seeking the support. This is a precondition to help health and care authorities to build their capacity for the successful transition towards integrated care.

Results:

A key aspect of the SCIROCCO self-assessment tool is that of context and transferability. In particular, the Tool considers the context in which an integrated care solution has been developed and context into which that solution will be transferred. The Tools also helps to understand the maturity of local conditions enabling the adoption and scaling-up of integrated care and inform about the strength and weaknesses of particular region and organisation in integrated care. This in turn informs about the priorities improvement and focus of the capacity-building support.

Lessons:

The experience of regions in using the SCIROCCO tool to facilitate knowledge transfer and capacity-building support demonstrates the clear benefits of the tool in stimulating multi-stakeholder involvement and learning on future directions of integrated care and transformation of health and care delivery systems in Europe.

Maturity of integrated care in Scotland - What can we learn?

Stuart Anderson

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Issue/Problem:

Multiple chronic conditions and the complexity of needs arising from them demands a rethinking of delivery systems, innovation, and resourcing. Tools and methodologies that help understand these complex transformational processes and orchestrate discussions of all stakeholders involved are core to this process. As a result, Scotland was keen to apply SCIROCCO tool to assess their readiness for integrated care.

Results:

The application of SCIROCCO self-assessment tool showed a range of strengths and weaknesses of Flanders region to adopt and implement integrated care. More than 15 stakeholders were involved in this process which proved the importance and added value to the assessment process. In addition, the outcomes of this process help to identify the potential focus of the capacity-building support.

Lessons:

SCIROCCO tool is a very useful participatory tool which can help to drive the transformational change towards integrated care.

Maturity of integrated care in the Basque Country - What can we learn?

Jon Txarramendieta Suarez

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Issue/Problem:

The need for sustainable resourcing drives professionals, end-users and the wider public and private sectors to draw on their experience and expertise to meet those needs. Tools and methodologies that help understand these complex transformational processes and orchestrate discussions of all stakeholders involved are core to this process. As a result, Basque Country was keen to apply SCIROCCO tool to assess their readiness for integrated care.

Results:

The application of SCIROCCO self-assessment tool showed a range of strengths and weaknesses of Basque Country to adopt and implement integrated care. More than 15 stakeholders were involved in this process which proved the importance and added value to the assessment process. In addition, the outcomes of this process help to identify the potential focus of the capacity-building support.

Lessons:

SCIROCCO tool is a very useful participatory tool which can help to drive the transformational change towards integrated care.

Maturity of integrated care in Poland - What can we learn?

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Issue/Problem:

The need for sustainable resourcing drives professionals, end-users and the wider public and private sectors to draw on their experience and expertise to meet those needs. Tools and methodologies that help understand these complex transformational processes and orchestrate discussions of all stakeholders involved are core to this process. As a result, Poland was keen to apply SCIROCCO tool to assess their readiness for integrated care.

Results:

The application of SCIROCCO self-assessment tool showed a range of strengths and weaknesses of Poland to adopt and implement integrated care. More than 15 stakeholders were involved in this process which proved the importance and added value to the assessment process. In addition, the outcomes of this process help to identify the potential focus of the capacity-building support.

Lessons:

SCIROCCO tool is a very useful participatory tool which can help to drive the transformational change towards integrated care.

9.H. Workshop: National approaches to Public health; policy, strategies, legislation and implementation in Europe

Organised by: Federal Centre for Health Education, Robert Koch Institute, Future Forum Public Health, Germany
Chair persons: Yvette Shajanian Zarneh - Germany, Svenja Matusall - Germany
Contact: yvette.shajanian-zarneh@bzga.de

Background:

During the past decades, the growth of knowledge to prevent disease on the one hand and the growth of public acceptance to prevent disease on the other hand led to form public health systems. Soon after, health was no longer considered as an individual responsibility only, and more effective interventions against health threats and communicable diseases were developed. As a result, public agencies and authorities were established to implement newly discovered interventions against health threats and to prevent non-communicable diseases.

Though, the orientation of public health agencies and authorities shifted from prevention of disease to promotion of health in almost all countries, their public health systems are developed widely differently. While some countries look back to traditionally established public health systems, others are pursuing different approaches to achieve Health in All Policies through policy and legislation in Wales or are now evaluating their public health policies after a ten-years-strategy, like Sweden and still others have only recently (2015) introduced a new Preventive Health Care Act and follow a bottom up approach called ''Future Forum Public Health'', like Germany.

Objectives:

This workshop aims at presenting the very different perspectives on the achievement of public health and different systems around Europe. Both, the disparity of the approaches and their different forms, and different stages of their development will be addressed by each presentation. Despite differences of the public health systems in each context, the workshop will focus on identifying shared features and common challenges of the countries with the goal of identifying inspiring examples and discussing criteria of transferability. During the discussion that will follow, different possibilities of cooperation and exchange will be assessed and debated.

In particular, the workshop will encompass a presentation from Wales on ''the future generation's act'' and will include information on the requirements to turn the legislation into practice. The Swedish input will focus on the Swedish national public health policy and its achievements after ten years. France will give an overview of the structural developments during the last ten years. The presentation from Germany will consist of contrasting a top-down and a bottom-up approach, namely the act to strengthen health promotion and prevention in Germany on the one hand and the future forum public health on the other hand. And last but not least, we will hear about the particular success of the Slovenian example with a newly shaped and largely developed public health system.

Key messages:

- Acquiring insight into different approaches to achieve improvements in public health based on alternative systems is important to identify inspiring examples, shared features and common challenges.
- Identification of criteria of transferability of public health strategies, legislation and policies between countries, and requirements for implementation are crucial for learning from best practice.

The preventive health care act and the future forum public health in Germany

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The public health system in Germany, similar to education and cultural affairs, is characterised by the federal structure. It is mainly regulated and decided at the state and municipal level, and not primarily at the national level.

The preventive health care act (The Act to Strengthen Health Promotion and Preventive Health Care) (2015) underlines the setting-based approach of health promotion and takes a life course perspective by recommending goals of growing up healthy, living and working healthy and healthy ageing. The act formulates broad recommendations for prevention and health promotion at the national level, that in turn take on concrete forms in mandatory framework agreements at the federal state level with uniform health objectives. On the whole, the key objective of the act is to improve preventive health care and general health promotion. Also the financing of the act by the mandatory health insurance is a special feature and at the same time a novelty.

At the same time a bottom-up project has been recently launched with the aim to develop a public health strategy in Germany. The project future forum public health (ZfPH) is a platform for public health professionals, researchers and students following incorporated concepts of policy analysis as well as methods that will ensure participation, transparency and transferability of the results into policy and practice. Over the next three years, ZfPH's steering group will moderate a participatory process, including stakeholders from public health practice and research as well as policy makers. In an evidence-based approach, they will first analyse the current state of Germany's public health system before developing concrete policy recommendations for a coherent and efficient public health system.

The presentation will give a short overview over the German public health system and the preventive health care act, its structure and the achievements as well as the bottom-up project future forum public health.

The future generation's act: Wales

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The Wellbeing of Future Generations (Wales) (WFG) Act 2015 is ambitious legislation that enables a step change in the way public services tackle health and societal problems. The WFG Act includes clear requirements for public bodies to share a common purpose, by setting seven wellbeing goals focused on improving social, economic, environmental and cultural wellbeing. The Act requires public bodies to act collectively, plan for the long-term, involve people and communities in decision making, prevent problems occurring and take a joined-up approach to assessing wellbeing and planning. Monitoring and accountability structures include the establishment of a Future Generations Commissioner, whilst progress is monitored and reported against using National Indicators and reporting as part of the UK to the United Nations International Sustainable Development Goals. The Act represents a milestone for public health, with health and equality goals on par with goals for the environment and economy and a clearer articulation of the social and economic determinants of health. The presentation will provide a short introduction to the background and development of the legislation, but the main focus will be on what is being done to drive and support implementation at various levels of operation; for individuals, for teams, for organisations and for government and systems in order that the potential reach of the legislation is realised.

The Swedish national public health policy and its achievements after ten years

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Public health issues and their equality aspects have been on the political agenda in Sweden since the early 1980s. Already in the 1990s, the Government presented the first public health policy bill. This highlighted the conditions for a sustainable development from a public health perspective. Increased equality was set to be the overriding objective in prioritizing public health work and that priority should be given to efforts that would improve the situation of the most disadvantaged.

The foundation of today's public health policy was laid in 2003 when the parliament decided on a new bill in which an overall goal for national public health policy was established: 'Creating social conditions for good health on equal terms for the entire population'. The bill also established a cross-sectoral target structure for the overall public health work with eleven target areas. It also pointed out that public health policy is cross-sectoral and must be a part in all policy areas. In June 2008, the parliament adopted the bill A Renewed Public Health Policy. Changes made were (among other things) a rewording of the target areas, but many of the starting points were kept.

The Swedish Commission for Equity in Health was set up in 2015 and given two main tasks, to produce a proposal that can help to reduce the health inequalities in society and to work for raised awareness of health inequalities in society and among stakeholders. The work of the commission was finished in 2017 and presents an analysis of how the public health policy works in practice, with regard to the intentions of policy framework. A number of problems or areas of development appear which the Commission considers need to be addressed.

The presentation will first give a short overview of the Swedish public health policy from 2008 and will then present the commission's conclusions and proposals for development areas.

Slovenian PH system: reshaping and new approaches to interventions and linkages with primary care

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Slovenia's public health started a new era of proactive interventions jointly with primary care since early 2000s, based on the heritage of the outreach approach developed in that territory in early 1930s. The National Programme for the Early Detection of Risk Factors for Cardiovascular Diseases was launched two decades ago.

Development of a screening programme led to the need to build capacity for lifestyle interventions and the subsequent broader involvement of public health and health care professionals.

Public health interventions addressing challenges, such as those related to primary and secondary prevention, have to be closely linked to the work in the local communities. This is best achieved in developing programmes jointly with primary care, municipalities, educational and social sector as well as NGOs. The original approach of developing secondary prevention interventions needs a further amplification in broadening the base for interventions from a single problem to an array of issues.

Previous approach with the development of Health Education Centres (HECs) was to be upgraded through the development of Health Promotion Centres (HPCs). This required the move from a more traditional approach to addressing individual determinants arising primarily in individuals to a comprehensive approach addressing health and health determinants in all ages. The focus of intervention becomes the local community and the central location is the primary health centre with the specific focus to health equity.

Development of primary and secondary prevention interventions is a measure to address health in the local community. Their placement in primary care ensures equality in access to all citizens in all age groups. Flexibility in approach enables us to develop interventions for the different facets of health.

The public health system in France and the structural developments during the last ten years

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In 2009, the hospitals, health and territories act has entrusted the responsibility for care and public health to the regional health agencies. This decentralisation aims to adapt strategies to local situations. These regional agencies have a very strong autonomy.

In 2013, it was stated in the national health strategy that it was necessary to develop a scientifically based prevention. Two tracks are to be followed: either by importing and adapting validated or promising programs by identifying effective programs in the international literature; or from existing French initiatives (tobacco, alcohol, psychoactive substances, physical activity).

The high prevalence of smoking motivated the establishment of a National tobacco reduction program in 2014, which was then relayed by a national tobacco control program.

In 2016, the Health System Improvement Act created a major national public health agency combining surveillance, prevention, health promotion and emergency response. The motivation was to achieve greater synergy and collaboration between the different functions in public health. A report from the Inspectorate General of Social Affairs has recommended that this agency should establish a national portal with evidence-based prevention and health promotion programmes.

Established in 2018, the Priority Prevention Plan is a major interdepartmental project to improve the health of the population, and is part of the National Health Strategy. This interdepartmental approach reflects the Government's desire that all ministries should be able to contribute to prevention and health promotion.

The increased investment in prevention and health promotion is starting to bear fruit with 1.6 million fewer smokers between 2016 and 2018. Immunisation coverage has also been improved. NutriScore, a nutritional information on the front of food containers, very easy to understand, has been put in place with partnership with 100 companies.

9.I. Skills building seminar: Skillscamp: from soft skills to health for all

Organised by: EUPHAnxt, EuronetMRPH, Young Forum Gastein
Chair persons: Alexei Croitoru - Austria, Gisela Leiras - Portugal
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Soft skill-intensive occupations will account for two-thirds of all jobs by 2030. [1] Soft skills, also known as ‘‘people skills’’ or ‘‘interpersonal skills’’ are personal attributes that enhance an individual's interactions, career prospects and job performance. Those skills are of crucial importance for problem solving, teamwork, leadership development, mentoring, etc. They are also actively applied and broadly fostered in both public and private sectors as well as NGOs, social entrepreneurship, media, etc. These actors play an essential role in achieving Universal Health Coverage (UHC) along with health inclusion and equity due to their contribution to public economy, involvement toward specific population and advocacy power.

Key public health (PH) interventions require health professionals with strong soft skills. For example, a vaccination programme can be strengthened by health professionals who are able to address patients' concerns about vaccination and explain its benefits. Having PH teams with a wide variety of perspectives, multidisciplinary backgrounds and skills, adds significantly to the improvement of provided services and medical results.

The demand of soft skills requires contextually appropriate PH interventions, depending on the population's needs, socio-economic and societal structures. Hence, in order to solve the persisting problems and achieve actionable results, the intervention shall be tailored to fit the concrete target group. In order to reach Goal 3 of the Sustainable Development Goals (SDGs) and particularly ‘‘health for all’’, soft skills are essential to empathise and interact with social groups with specific needs.

The workshop will address the challenges faced by medical professionals in the interaction process with three specific social groups. To optimise PH interventions in the most inclusive and equitable manner, adequate soft skills are required. Therefore, the focus will be on highlighting the skills which are essential to successfully perform PH interventions.

Within the scope of the session, the necessary soft skills will be defined and analysed. Also, their application in the context of PH will be demonstrated and exemplified. The attendants will be invited to discuss real-life examples and have the possibility to exchange their own experience and expertise with each other.

[1] Deloitte Access Economics ‘‘Soft skills for business success’’, DeakinCo, May 2017

Key messages:

- Soft skills are increasingly needed in achieving successful public health interventions.
- PH professionals need more awareness of the powers of soft skills.

Introduction to soft skills

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She will introduce soft skills, their use and development through a PH career. She will outline soft skills related to medical background and those related to non medical background and how people using them should work together. The last part will introduce soft skills use for vulnerable population providing examples of their importance in specific situations. (30')

Soft skills for esearch on gender and sexual minorities

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LGBTQI+ individuals and the healthcare system. Arjan will present a variety of issues that LGBTQI+ individuals may face when trying to access healthcare or during interactions with healthcare professionals. The group will discuss how and which soft skills would tie into these issues and will brainstorm about ideas for strategies tackling LGBTQI+ discrimination in healthcare systems across Europe. (20')

Challenges and opportunities for health professional providing care for refugees and migrants

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Health professionals face specific challenges providing care for migrants and refugees, including communication barriers, misunderstanding due to cultural differences, patient's low health literacy. Rather than relying exclusively on a preconceived knowledge about migrant cultures, health professionals should invest more in the relationship with the patient listening and giving prominence to the patient's story. This part of the WS will explore the soft-skills needed to establish a trustful and effective care relation with migrant and refugee patients. (20')

Soft skills to improve the health of homeless people

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Issues that homeless people may face during access to healthcare will be presented. The group will discuss skills needed to overcome those gaps, how they can be developed and ideas to use then in an effective way when interacting with homeless population. (20')

Interactive activity and discussion

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A representative of each group will be invited to share the outcomes and main points with the audience.

9.K. Workshop: To regulate or not to regulate: that is still the question

Organised by: EUPHA
Chair persons: Natasha Azzopardi Muscat - EUPHA, Dineke Zeegers Paget - EUPHA
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Public health has always had a close relation with regulation. In the middle ages, the spread of infectious diseases was regulated by imposing a quarantine on travellers, this measure is still the first step to containment of an infectious disease. In the last century, public health regulation was also aimed at smoking, for instance implementing laws to ban smoking in public places (e.g restaurants). These regulations are very often combined with public health information campaigns on how to quit, the negative effects of smoking and passive smoking. In recent years, public health still calls for regulations now aiming at food, such as the fat tax, soda tax and sugar tax.

Regulating for public health is a complex and sensitive issue. Sometimes it is used to solve public health's failings at promoting a healthy lifestyle. For instance, the information campaigns to overcome obesity and invite people to eat healthily and exercise were not as successful as planned and the obesity epidemic remains an increasing problem. So, law kicked in and taxation policies to change dietary behaviours were introduced. Taxation policies, however, are controversial and widely discussed. The term 'Nanny-State' where the government is regarded as overprotective or as interfering unduly with personal choice, comes to mind and this has a negative impact on public health.

The question remains: should we regulate for healthier behaviour or not. In this workshop, we are going to try answer this question. After two general presentations, we have 3 country examples of the relation between law/regulations and public health, followed by a discussion with the audience.

Key messages:

- Regulation can be one of the tools to promote public health.
- Careful consideration should be given before regulating for public health.

Building bridges between public health and law

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The nanny state has become a metaphor in debates about public health regulation, cautioning governments against taking action. The nanny state metaphor is being used to criticize health policies for restricting choice and autonomy and warn against undue paternalism. Nanny state accusations can function as powerful rhetorical weapons against interventions that are intended to benefit people.

An emerging trend to tax sugar sweetened beverages and other junk foods: overregulation or an effective way to modify dietary behaviours?

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Dietary behaviours have an important impact on rising prevalence of noncommunicable diseases responsible for 71% of deaths globally/year. Dietary behaviours also have a growing impact on quality of life, disabilities, as well as economic stability of health systems. In order to overcome the growing impact, many countries are looking for instruments to modify dietary habits of individuals. In the study presented here, we looked at solutions implemented in different countries in terms of junk food taxation, with regard to the political processes related to their implementation, adopted models of taxation, as well as their impact on social and economic reality. Throughout the world, several countries have adopted dietary taxes, such as sugar, fat, salt and soda taxes, while the other are planning or considering doing so. So far there is only one example of withdrawal from the tax that has been implemented. There are different models of taxation, including flat rates, percentages of the basic price and progressive rates on the amount of the component being subject to taxation. These solutions continue to be controversial and subject to intensive discussions in many countries. Nonetheless, the existing evidence shows that the impact on dietary habits seems to be positive.

Example 1: Danish regulations to phase out smoking

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In recent years, progress in Danish tobacco control has come to a halt and there has been an increase in smoking prevalence.

A capacity assessment report on the implementation of effective tobacco control measures concluded that there is no overall strategy or plan to protect children, adolescents and adults from the harms of tobacco, despite the national vision of no children and adolescents smoking by 2030. Another finding was that the tobacco industry is influential in Danish policy-making and not properly regulated. Key recommendations were: 1) Develop an overall, comprehensive strategy and implement a well-designed plan. 2) Increase tobacco taxes. 3) Adopt plain packaging and a point-of-sale display ban. 4) Ensure protection from exposure to second-hand smoke and 5) Protect public health policy from the influence of the tobacco industry. The Danish Government, however, is very reluctant and there is no sign of implementation of the recommendations, despite strong public support. On the other hand, there is progress at local level as many municipalities and private workplaces have implemented smokefree working hours (no smoking at all during working hours, even if you work at home), schools have implemented smokefree school hours (no smoking from 8 to 16, even if pupils go home for lunch or break) and large supermarket chains have implemented point-of-sale display bans.

Example 2: The Italian law on compulsory vaccinations

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In March 2017, the so-called ‘‘Lorenzin law’’ (named after former health minister Beatrice Lorenzin who was responsible for the bill) was introduced to implement compulsory vaccination for children six years old and younger to be allowed into the school system. Without proof of the required immunizations, including those for measles, mumps, rubella, chickenpox and polio, children were not eligible to attend kindergarten. But the Five Star Movement and the League, which formed a ruling coalition in 2018 to form the current government, pledged to scrap the vaccination obligation during the run-up to elections in March, courting the so-called ‘‘anti-vax’’ vote. The newly appointed minister of health, Giulia Grillo, adopted a temporary measure relaxing these vaccination requirements until the end of March 2019. The temporary measure allowed children to stay in school as long as their parents attested that the children had been vaccinated. A doctor’s note was not needed.

The temporary measure was adopted pending a complete revision of the law on compulsory vaccinations. As no new law was adopted in March 2019, the previous law returned to force, leading for instance to around 300 children in Bologna, Italy, not being admitted to kindergarten as they did not have the required immunizations. Amid confusion over the rules as the new school year begins, the governing Five Star Movement (M5S) presented parliament with an amendment that effectively halts its own reform and reinstates the previous vaccination requirements.

Example 3: The Dutch ‘polder model’

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The Dutch are known for their ‘polder model’, a form of consensus decision-making and cooperation despite differences. In line with this longstanding tradition, the Federation for Health has transformed itself from a national public health association into a national public-private network that strengthens the foundation for health actions at the widest scale possible. More than 70 organisations have joined the network. Amongst them organisations like public health institutions, professional societies, healthcare insurers, private companies, and health start-ups. Instead of calling for regulation or legislation, the Federation for Health promotes the incorporating of the ‘right’ incentives in healthcare and society at large. Examples are the advocating for a national prevention agreement, the development of a new business model based on health (instead of disease), and the advocating for a national digital health agenda. The Federation for Health is using the following tools:

- Sharing of information
- Develop common ground
- Develop an all-inclusive advocacy strategy
- Broaden the vision to non-health-related areas (e.g. social domain, housing, education, businesses)
- Collaborate outside the field of health (building bridges)

9.L. Round table: Health in Environmental Impact Assessment: getting serious about primary prevention

Organised by: WHO RHN, WHO ECEH, Regional Government of Andalusia, EUPHA, (HIA)Chair persons: Francesco Zambon - WHO EURO, Piedad Martin-Olmedo - Spain
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There is an increasing awareness in Europe that health is determined largely by factors outside the health sector. Thus, as public policies in all sectors and at different levels of governance may have a significant impact on population health, a new approach for tackling health is needed. Health in All Policies is an approach to public policies across sectors that systematically considers the health implications of decisions, seeks synergies, and optimises them to improve population health and health equity. Therefore, engagement of the health sector in other policies should be a priority within public health. However, it is bound to meet some resistances as it entails new roles in public health practice, bringing some practitioners out of their comfort zone.

Implementing the health in all policies agenda on the ground is challenging, and tools such as Health Impact Assessment (HIA) are needed to enable policy-makers to predict and govern the consequences of their proposals on the well-being of the affected population, and to optimise them. Advocacy and support from the public health sector are imperative to achieve these goals. This also means placing public health professionals outside their usual area of expertise, confronted with alien sectors such as urban planning or infrastructure development.

HIA expertise and capacity are still scarce and unevenly distributed in Europe. Indeed, lack of awareness, capacities and resistance from public health officials are usually cited as some of the barriers preventing its establishment as a field of work in many countries. To deal with this problem, many countries and subnational entities have been developing resources such as databases and websites, while others have embarked on capacity building. As a result, there has been a widespread use of HIA in Europe in recent years and sharing some successful case studies is important.

The WHO Europe Regions for Health Network (RHN) aims at documenting and disseminating best practices to improve populations' health across Europe. Andalusia (Spain), through its Regional Ministry of Health, has been implementing HIA over the last five years, focusing on the development of tools and procedures, identifying elements of success, conflicts and reluctances, and windows of opportunity.

This workshop is intended to share the existing experiences on HIA and to launch a new RHN case-study publication collecting best practices on HIA across Europe.

After an introduction by the chairperson, a presentation by WHO will provide an overview of HIA in Europe, followed by a representative from Andalusia who will focus on the challenges and opportunities found in implementing HIA as a stand-alone document partially integrated with Environmental Impact Assessment procedures. The presentations will be followed by a panel discussion with panelists representing the subnational level of governance, from 5 different countries in Europe: Belgium, Germany, Russian Federation, Spain, Switzerland.

Key messages:

- HIA is a tool for implementation of the health in all policy agenda; a resource for addressing complex environmental health determinants and a way of being faithful to WHO's definition of health.
- HIA can be simple, if needed. In HIA, too, the best is the enemy of the good. It ''operates deliberately in imperfection'' as in many cases where stakes are high, decisions urgent and evidence uncertain.

Health impact assessment: what it takes, what it can and cannot deliver

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WHO, along with other health agencies, has been long promoting intersectoral action between health and all sectors of society, so as to address major, ''upstream'' determinants of health. Sectors as environment, transport, energy, agriculture etc, influence countless, powerful such determinants, mostly out of reach for the health sector; health-friendly (or at least health-minded) decisions on those determinants can result in a strong leverage for health advocates to achieve primary prevention.

This undertaking requires: the establishment of a common language to be used with other sectors; the recognition of the complex web of causation between health determinants and health outcomes; commitment to working with a broad model of health combined with a preparedness to prioritise where necessary; a sound comprehension of the reality of decision making in different political environments; realistic expectations on what can and cannot be achieved through cross-sectoral dialogue; willingness to listen to stakeholders; constant attention towards health equity.

Health Impact Assessment (HIA) is an established approach towards these goals. HIA describes a broad range of methods and tools, building on different disciplines and expertise. HIA aims at estimating and predicting consequences and impacts of proposed policies and plans, with the ultimate goal of influencing decisions, making them more health friendly, equitable, legitimate and sustainable.

The practice of HIA has been evolving in the last 20 years. Many years of application have been instrumental in identifying strengths and weaknesses, opportunities and threats in different settings. HIA has delivered handsomely in some countries or regions, while it struggles to become established in others. A continued critical evaluation of successes and failures remain important to make further progress in this domain. In this presentation, WHO will present recent progress and open questions on the practice of HIA in Europe.

Systematically introducing the 'health factor' in decision-making is possible: The success case of Andalusia

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Health Impact Assessment (HIA) as a stand-alone report integrated in environmental assessments has been compulsory for the last 5 years in Andalusia. In this time, it has been proven as a successful tool for implementing the Health in All Policies strategy, delivering consistently better outcomes for the examined projects.

We will describe the tools and methods used to achieve these results through the presentation of three examples. In so doing, it will be shown how HIA allows us to consider issues often neglected in decision-making processes and how it provides with an added value over other assessments already being carried out.

The first example deals with a food industry. HIA focused on the depiction of affected population, singling out vulnerable traits using geographic information systems and open social and demographic data. Combined with a study of air dispersion of pollutants, it enabled us to find inequities in the distribution of impacts, propitiating thus the inclusion of additional measures of emissions abatement.

HIA also helps raising awareness in other sectors. The second case shows a big change of attitude experienced in the urban planning department of a big city. After some initial reserves, the municipality based the decision about the relocation of a social centre on the assessment of expected positive impacts on social determinants of health. Bringing together these outcomes and the results of public consultation, a new optimal location was chosen.

Finally, HIA also allows for greater transparency and accountability in public policies. The report for the Andalusian Air Quality Strategy not only provided health outcomes (morbidity and mortality) but also turned them into monetary values, as experience has shown that policy-makers find it difficult to understand standard health measures. This approach makes possible to contribute to cost-benefit analysis and keeps in line with EC guidelines on Public Policies Assessment.

Panelists:

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9.M. Workshop: Creating healthy living environments in municipalities – European concepts, needs and actions

Organised by: Federal Centre for Health Education, Germany
Chair persons: Christina Plantz - Germany, Eike Quilling - Germany
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Health equity is influenced by the local social and physical environment we are living in. Municipalities all over Europe have a key role in shaping and addressing these living conditions. This is why one of the Work packages in the current EU Joint Action Health Equity Europe (JAHEE) deals with the living environment, and what municipalities can contribute to shape them in a health promoting and equity-oriented way. Current action in this field is fragmented, varies highly between and within European countries and strongly depends on political leadership. The Work package aims at providing a systematic and structured support for participating countries in taking action to create healthy living environments. In Work package 6 - Healthy living environments, 17 national and regional public health authorities from 13 countries collaborate to exchange knowledge, practices and implement actions that promote healthy living environments.

This workshop aims at bringing together current knowledge and experience of why and how to create healthy living environments on the municipal level. Furthermore, it is supposed to inform what countries currently do and need to do in this field of action from the perspective of national public health institutes and ministries of health. And thirdly, an innovative local example of how to put the theory into practice will be presented.

The ''Should be'': The first presentation will describe the common conceptual basis for the project partners - the Policy Framework for Action. As was agreed upon among the project partners, the specific focus is a broad community approach towards health promotion that is steered from the municipal level.

The ''To be'': The second presentation will focus on common European challenges and potentials based on the country assessments that were conducted in the frame of the project, and how municipalities can be supported from the European, national and regional levels. Third and fourth presentations will present more in-depth country reports from Greece and Serbia describing the current capacities and potential for municipal health promotion.

The ''Good Practice'': The fifth presentation from the Netherlands will present an innovative approach from the City of Utrecht that is implemented in the frame of the Joint Action Health Equity Europe.

The findings will be discussed using an interactive online-tool, and finally next steps, future actions and recommendations will be outlined.

The workshop will give the possibility for stakeholders that are not currently involved in the Joint Action to inform themselves of the activities on the European level. The broadening of the audience is also crucial for enhancing awareness of health equity and healthy living environments as well as increasing the acceptance of the conceptual framework at national levels. Through exchange of knowledge and experience, potential new partners could be reached and involved in the project.

Key messages:

- The workshop brings together current knowledge of why and how European municipalities can create healthy living environments.
- The workshop presents what European countries currently do and need to do in this field of action.

A common European framework on how to create healthy living environments on the local level

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In a consensus-process, 17 national and regional Public Health authorities from 13 European countries agreed upon a common Policy Framework of Action (PFA) that summarizes the current evidence making the case for healthy living environments and the role of municipalities. The PFA provides a conceptual model for interventions including an ideal process, quality criteria and guiding principles that municipal approaches should be based on.

The PFA is a consensus document based on the results and decisions of the first meeting of the JAHEE-work package partners. It was then circulated among the Work package partners and the JAHEE Steering Committee in two feedback rounds. The PFA development was supported by an interdisciplinary German expert group in the field of public health. To draw up a catalogue of criteria to identify promising practice projects, a number of existing quality assurance instruments for health promotion and prevention focusing on reducing health inequalities were examined and central aspects of the various instruments were identified. The suggested catalogue of criteria is based on good practice as defined by European experience (EQUIHP, JANPA, CHRODIS, INHERIT and the good practice criteria of the German network Equity in Health). These instruments were systematically compared and the criteria found in most instruments were included in the criteria catalogue for the PFA.

Result: 16 good-practice-criteria could be identified - such as ''target group orientation'', ''concept driven strategy'', ''empowerment'', ''networking'' etc. These criteria form an essential basis for the further partner process in the Joint Action. Furthermore, the PFA provides a conceptual model for interventions including an ideal process based on the public health action cycle and guiding principles that municipal approaches should include.

Current capacities and challenges for equity-oriented municipal health promotion in Europe

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As a basis for implementing actions in the frame of Work package 6 - healthy living environments in the Joint Action Health Equity Europe, each of the 13 participating countries conducted a country assessment.

Methods:

The country assessments were self-assessments conducted in the first quarter of 2019. Partners received templates that had been agreed upon beforehand. Most of them conducted the country assessments by themselves or with the help of colleagues from their institutions as a desk-based review, and validated results with external experts and stakeholders. The first part of the country assessment referred to how municipal health promotion capacities are currently developed in the countries. Through the second part of the country assessment, each of the 13 countries selected up to 4 promising practices.

Results:

In most of the 13 countries, municipalities have a clear mandate to promote health. However, there is a big heterogeneity in resources, structures and capacities of municipal health promotion within and between countries. One key challenge is the self-government of municipalities and health promotion as a voluntary task. One of the main problems is a deficit in intersectoral working. It appears that poor municipalities are even more disadvantaged in terms of capacities for municipal health promotion. 33 promising practices were identified, covering programmes, strategies, tools and interventions mostly from the local level, with a big variety of topics and approaches for health equity.

Conclusions:

There is a big fragmentation and heterogeneity in municipal health promotion between and within European countries. National and regional public health authorities are in the position to contribute a lot to support municipalities. This can include promoting quality development, providing data, integrating health equity in existing structures, plans and approaches or collaborating with the broad range of existing stakeholders and networks.

Country Report: How do Greek municipalities currently promote health and health equity?

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The establishment of municipalities in Greece is governed by Kallikratis Law (2011). There are 325 municipalities in Greece. The municipalities promote activities relating arts, education, health, sport and social services. In addition, there are a few national laws giving municipalities extra possibilities. Main financial sources of municipalities are municipal taxes, fees and duties, VAT tax. Central government finances major infrastructure projects in the municipalities, based on individual projects. Also, some NGOs are helping municipalities in their social role.

Aim:

The investigation of the promotion of health and health equity in municipal level.

Findings: Social determinants of health are the main causes for health inequalities at a municipal level. Due to that, some municipalities have developed programs to mitigate them. Municipalities have developed the National Intermunicipal Network of Healthy Cities - Health Promotion has as its sole purpose the prevention of diseases, health Promotion, the screening control of high-risk population groups and generally promote integrated policies in the field of Public Health. Today includes 218 (67%) KALLIKRATI Municipalities from all regions of the country.

Municipal social capacities are: kindergartens, programs for migrants, daily care centres for elder people, health care centres (urban and rural), community nursing /home nursing care, mainly to elder and vulnerable groups.

Environmental hygiene: The most important role is the collection of household waste and their appropriate disposal, as well as the protection of the environment.

There are difficulties in promoting health and health equity by the municipalities: a) lack of financial & human recourses, b) lack of explicit responsibility of Municipalities c) lack of capacity about health issues and 4) bureaucracy.

Conclusions:

There is place for action at the municipal allowing municipalities to implement various programs relating to healthy living environments.

Country Report: How do Serbian municipalities currently promote health and health equity?

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A legal framework set in Serbia provide good basis for creating healthy living environment and health promotion at local level. The present system of local government in Serbia, with its 174 units is regulated by the Law on Local Self Government. In accordance to this Law each municipality has got a certain level of decision-making. Creating healthy living environment is one of the key objectives of municipal policy and its agenda. However, the extent of their inclusion and implementation is very heterogeneous between municipalities. Unequal municipalities' capacities (financial, technical, human resources) for coordination and development of healthy living environment on the municipality level are crucial challenge. In order to support the activities at the local level, the Network of 24 regional institutes of public health, led by the Institute of Public Health of Serbia, develops public health guidance, participate in drafting local strategies, programs and activities. Additional support is provided by the Local Health Councils, increasing a political sensibility for prioritizing issues to achieve healthy living environment. The coherent framework of mandates, local strategies and action plans for improving the public health have been established through widespread cooperation between the institutes of public health, health councils, and other stakeholders (e.g. nongovernmental organizations and governmental bodies such as the ministries responsible for education, environmental protection, youth and sport). In spite of that, their implementation is restricted by low awareness of importance of health equity and health promotion. In that sense, training and education on health promotion and health equity issues are crucial to raise the awareness, increase health literacy and enable satisfactory and quality implementation of defined strategies, programs and activities at the municipality level.

How the City of Utrecht develops a Health and Equity in all Policies approach

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Public health policy, spatial and environmental policies are within the Dutch municipalities' competencies. In 2021 a new act will be implemented, in which todays' more sectoral acts and decrees will be integrated into the so-called (Healthy) Living environment act. This will require more integrated, inter-sectoral and multi-level governance approaches. And new topics and societal challenges, such as health, sustainability and resilience, are introduced within the physical planning domains.

Dutch reviews learn that public health and social domains are collaborating quite well at the local level. The cooperation and integration of health, environmental and spatial planning, on the other hand, often is less or even absent. In Utrecht, though, the latter inter-sectoral approach is strong; health in all policies has been the 'mantra' since several years. Supported and institutionalized through strong political leadership, and interdisciplinary teams at neighbourhood and city level, for policy development and implementation in line with the city's ambitions of Healthy Urban Living for Everybody.

Utrecht is the healthiest and fastest growing city in the Netherlands, and aims to use its growth (in population, jobs, houses, etc.) to address health inequalities. The city is linking spatial challenges with social challenges, building and improving houses and residential areas for all citizens. A new initiative, called social renovations, will be explored and reviewed within the JAHEE process. This initiative addresses many of the relevant topics, such as healthy living environment planning, stakeholder involvement and specifically reaching 'hard to reach groups', and improving housing and public space conditions and subsequently health and well-being of vulnerable groups.

9.N. Round table: Strengthening capacities in health information for better public health practice in Member States

Organised by: InfAct, Sciensano, EUPHA (PHMR)
Chair persons: Claudia Habl - Austria, Herman Van Oyen - Belgium
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According to Sir Michael Marmot: ''To address inequalities in health in Europe, our first step must be to address the inequalities in health information (HI). All too commonly where health is poorest, HI tends to be poorest. HI is absent or incomplete just where we need it most.'' One of the specific objectives of the Joint Action on Health Information (InfAct) is to reduce HI inequalities between and within EU Member States (MS). InfAct is addressing this through various capacity strengthening exercises including the design of a sustainable EU HI training programme. In this workshop, a first presentation will describe the development of the HI training programme for professionals working in HI within MS institutions. Subsequently, four capacity strengthening exercise will be presented illustrating potential topics to be covered in such a sustainable HI training programme. These 5 short presentations will feed the discussion of the workshop organised as a round table.

The first exercise is an assessment of HI systems carried out by InfAct through peer review in 9 countries using an adjusted WHO Europe tool. The exercise builds on the framework of mutual learning and good practice exchange to identify in a standardised way strengths and limitations, and recommendations for direct and long-term improvement of their HI system.

The second exercise presents 2 workshops given by InfAct on the European and National Burden of Disease (BoD) methodologies. The effort contributed to harmonising BoD methodologies at national and EU levels, thereby increasing comparability and facilitating knowledge exchange on BoD bilaterally and multilaterally in the EU.

The third exercise presents an example of capacity building activities organised in the framework of a national prevention programme on cardiovascular risk assessment, which includes training of health professionals, provision of training material and risk evaluation tools, implementation in clinical practice, health data collection, and feedback of results in the community.

The fourth exercise presents examples of capacity building activities by the European Health Examination Survey (EHES) initiative to establish a sustainable European network on nationally representative Health Examination Surveys (HESs), through hands-on training events, online training materials, person-to-person consultations, site visits and networking.

This workshop provides participants insights on current activities in HI capacity strengthening in Europe which address health (information) inequalities. Additionally, participants will be able to provide feedback on the development of the sustainable HI training programme and potential elements that could be included based on four practical examples. The participants will be able to highlight their needs in health information training by interacting through a round table panel discussion.

Key messages:

- Health information capacity strengthening is essential to address health inequalities. The workshop identifies what a sustainable EU HI training program can provide.
- Mutual learning, knowledge and good practice exchange can be organised in various ways – we show practical current examples on how it has been done.

Developing a health information (HI) training programme: strengthening the public health workforce

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Background:

New developments and technologies require skilled professionals to manage and use public health information in most efficient ways. However, currently training in specific fields is lacking and large inequalities exist in Europe in terms of the availability and training of qualified professionals.

Methods:

In order to set up a sustainable EU HI training program for HI professionals, core modules need to be selected to provide adequate training across Europe. This study a scoping review and is doing a survey on current existing HI programmes and aimes to identify the main educational components needed to train HI professionals. The databases of Pubmed and Ebsco were searched for the scoping review. The survey is being circulated to representatives of InfAct in 28 countries. Based on the results a baseline HI training programme for practicing public health professionals will be proposed.

Results:

Initial search identified 249 papers. After the exclusion of duplicates and unavailable documents, 53 papers were selected for review. Only 5 papers were found related to the European context. However the results from other papers could be extrapolated. The results were organised in 3 domains: organisation, people and technology dimensions. The development of HI capacities is often done through multiple and sequential interventions, which are adapted to the needs, conditions and resources available within each HIS. Thus, the importance of aligning training with working processes and usability in professional practice is key. This can be challenging, as HI functions are diverse across Europe. The results of the survey will be presented when processed by the time of the workshop.

Conclusions:

There is a need for qualified skilled professionals in HI taking into account a changing global environment. Most of HI capacity building programmes are yet to reach maturity, and this review and survey identify a set of important areas for further development of the HI training programme.

Strengthening health information systems in Europe through peer review assessments

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Background:

How does your Health Information System (HIS) measure up to others in the EU? How can you empower national HIS players with an objective peer-reviewed HIS assessment? Nine InfAct partners engaged in a capacity building exercise where experts in rotating groups of three countries performed peer assessments of each other's national HIS. Using a WHO Europe adapted and refined tool, assessors analysed the HIS of a country (data collection, processing, analysis, dissemination and use) and exchanged practices in an intensive 2-day schedule of interviews with established key stakeholders.

Objectives:

The aim of the peer assessment is three-fold: to test the feasibility of a peer-review HIS assessment, to map heath information inequalities across EU MSs, and to strengthen the knowledge of HIS players.

Results:

Two cycles are now complete and the feedback is overwhelmingly positive - from assessors and hosts alike. So far, the HIS assessment has been a major success in its ability to systematically and concisely analyse a HIS. It identifies gaps in the HIS through desk review and interviews, and provides a SWOT analysis and SMART recommendations to address these gaps. Additionally, this exercise has shown the ability to increase stakeholders' awareness of their role in their national HIS, and to build new networks within and between MSs. The exercise is also perceived as an opportunity for cross-fertilisation of ideas and exploration of methodologies on how to address specific challenges. This will stimulate actions to improve national HISs, and will lead to the identification of good practices which can then be used by other EU countries.

Conclusions:

By bringing together key HIS stakeholders from different countries and stimulating the improvement of HIS and the exchange of good practices, InfAct contributes to capacity building in the EU, which in turn may lead to the reduction of health information inequalities between countries.

Development of composite indicators to monitor burden of disease across Member States

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Background:

The burden of disease (BoD) methods are not part of routine public health activities and policy development process across all Member States (MSs). The main reasons for this are varying levels of knowledge, experience, and capability to apply and use BoD methods. Therefore, MSs need support, guidance and training to adopt and integrate BoD approaches in their public health systems. In this context, two workshops have been organised by InfAct. The main objectives of the workshops are to raise awareness, share knowledge and experience, and to provide mutual support to to integrate BoD indicators in the public health policies across Europe.

Methods:

The workshops were about the BoD concept and methodologies, and the use of BoD data in public health policy. These workshops were supported by technical presentations describing methods and the use of BoD data in health policy with various case studies, followed by expert exchange with facilitated discussions and group work. The case studies included national BoD studies from Belgium, Germany, Netherland, and Scotland.

Results:

Two workshops were held at Santé Publique France, and attended by 16 BoD experts and 40 participants from 25 MSs. The workshops were well received by the participants particularly with regards to the diversity of the group and the possibility to share knowledge and experience from various perspectives. Three areas of action were highlighted: 1. the need for methodological trainings to strengthen skills in interpreting and calculating BoD estimates; 2. the encouragement of more collaborations across MSs to share or exchange good practices on BoD; and 3. the importance of the implications of BoD data to guide policies across MSs.

Conclusions:

The workshops highlighted the need for capacity building activities to implement BoD approaches across MSs in routine public health activities and to use BoD data to guide health policy. More collaborations among MSs on BoD activities are needed in the future.

Global cardiovascular risk assessment: a national training course for General Practitioners

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Background:

Identification of high risk individuals is one of the main goals of the primary prevention of cardiovascular disease (CVD) and constitutes the basis for implementing actions aiming at reducing modifiable risk factors at individual level through changing life styles or drug interventions. The most appropriate method for identifying high risk individuals is the absolute risk assessment, a probability indicator of incidence, predictable on the basis of risk factors levels.

Objectives:

The CUORE project score of the National Institute of Health-ISS is adopted in Italy; since 2007 ISS has implemented a national training course for General Practitioners-GPs with the aim of supporting and facilitating the use of CVD risk assessment in clinical practice as a preventive action in the general population.

Results:

The training course is based on five sequential packages linked to educational credits: packages 1-2 facilitate the adoption of standardised methodologies for the assessment of CVD risk score; in package 3 patients are invited by GPs to assess the risk score; packages 4-5 evaluate and discuss data collected with GPs and stakeholders. A cascade training was implemented: ISS personnel provided training to local GPs who in turn provided the same training to other GPs. Two manuals for the training course were published.

Since 2007 about 4,300 GPs were trained; about 320,000 10-year CVD risk assessments were performed in 260,000 men and women aged 35-69 years. Feedback was provided to all GPs participating to the 4th-5th packages of the training courses.

Conclusions:

Implementation of the training course for the use of CVD risk assessment in the population represents a primary preventive action according to the recommendation of the EU Guideline on CVD prevention. The collected data may play an important role in the identification of strengths and weaknesses of preventive actions and represents the first step to improve good clinical practices standards.

Building a sustainable network of health examination surveys through training and mutual learning

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Background:

Health information is a broad concept and can be obtained from variety of data sources such as administrative and disease specific registers, surveys, longitudinal studies etc. Health surveys comprise two main formats; questionnaire based health interview surveys (HIS) and more comprehensive health examination surveys (HES) which include also objective health measurements and collection of biological samples. At the European level, HISs are coordinated under European Health Interview Survey (EHIS) by Eurostat. For HESs, the European Health Examination Survey (EHES) initiative has been responsible for the coordination and capacity building.

Objective: The EHES initiative aims to establish a sustainable European network on nationally representative HESs, which use standardised methods and therefore, provide comparable information between and within countries.

Results:

EHES has prepared standardised protocols for objective measurements and several guidelines for organisation of the survey. To enhance use of these protocols and guidelines, several capacity building activities took place during 2010-2019. These activities include hands-on training events, online training materials, person-to-person consultations, site visits and networking.

A survey among national HES organisers was conducted in 2017 to evaluate which of the capacity building activities were perceived as most important. Based on this survey, availability of standardised protocols and guidelines was seen very important as well as hand-on training events and person-to-person consultations.

Conclusions:

National HES data is actively used for health monitoring and identification of public health problems, for development of health and prevention programmes and to support evidence-informed policies. EHES capacity building activities support establishment and development of national HESs across Europe and enhance benchmarking between countries.

9.O. Workshop: Access to Medicines: A theatrical exploration of diverse perspectives

Organised by: University of Liverpool, UK
Chair persons: Lois Orton - UK
Contact: l.c.orton@liverpool.ac.uk

Health inequalities are a highly persistent phenomenon despite having been the focus of global public health action. Low income does not fully explain these differences; women, ethnic minorities and other excluded social groups also fare worse than the rest of the population. Intersectionality is an approach that has gained increasing attention for understanding the complex nature of social inequality and more recently for understanding health inequalities and identifying approaches to address them. An intersectional approach promotes the analysis of multifaceted power structures and processes that produce and sustain unequal health outcomes. It foregrounds how, particularly for the most vulnerable populations, we cannot consider just one axis of inequality, such as poverty, in order to understand differences in health. We must consider the full range of identities and experiences including age, gender, ethnicity, and more. Actions to redress inequalities must take account of how these multifaceted experiences inform one another. But how can we as researchers help with this challenge? There is no single preferred method. A variety of approaches from epidemiology to sociology have been proposed to understand how the intersections of complex aspects of social location, identity and diversity of experience shape health outcomes.

The aim of this workshop is to bring together those who have attempted to take an intersectional approach in their research and those who are interested to learn more about how to do this. Following an introduction to intersectionality theory, three presenters will briefly describe how they have attempted to take an intersectional approach in their research, reflecting on the opportunities and challenges of the approach. The included examples will represent a range of methodologies. In the first presentation, Kristefer Stojanovski will describe how a systematic review of published theories led to the development of a new conceptual model to describe the complex and intersectional pathways to poor health among Roma populations in Europe. Daniel Holman will then describe some multilevel analyses of intersectional inequalities in biomarkers of chronic disease in England. Finally, Lois Orton will describe her critical intersectional analysis of policies purporting to address the ‘‘problem’’ of Roma health and wellbeing. Following the presentations, plenty of time will be allowed for workshop participants to discuss the key considerations for successfully conducting research that takes an intersectional approach. Discussions will be guided by three key questions:

1. What kinds of research questions do we need to be asking in order to address the multiple interacting axes of inequality that shape differences in health?
2. What kinds of study design might help answer these questions?
3. How should we interpret the findings of such studies?

Key messages:

- An intersectionality lens might help to better understand and address health inequalities.
- It is possible to incorporate an intersectional approach into research, in terms of question formulation, study design and interpretation.

Utilizing new theories to understand the complex and intersectional pathways to poor health among Roma populations in Europe

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Background:

For decades Roma have had the poorest health outcomes among European citizens across the range of health topics including maternal and child health, chronic diseases and infectious diseases. Despite tremendous efforts, such as the Roma Decade and national policies, there have been limited improvements in health to improve parity with non-Roma European citizens.

Aims:

To provide an intersectional understanding of the health of Roma citizens in Europe through the use of complex systems theory.

Methods:

We reviewed peer-reviewed systematic and other major literature reviews, and civil society-based publications that explored the health of Roma. We thematically categorized the identified risk factors, how they influenced health across the multiple levels of the socioecological model (i.e., structural/ policy-, community-, organizational-, interpersonal, and individual-levels) and how the various factors were related to each other. A visualization of the complexity of issues was developed using Stella Architecture.

Results:

The findings indicate that poor health among Roma arises from a complex interplay and intersection of numerous factors across the socioecological model (e.g., structural, community, organization, interpersonal and individual-levels). This visual representation indicates that the poor health of Roma stem from larger structural forces. Moreover, some of the factors at play are related to a multitude of other factors and sometimes act recursively to further structure poor health among Roma.

Conclusions:

The poor health of Roma stems from numerous intersecting factors across multiple levels of the socioecological model. There is a need to improve structural- and community-oriented approaches to address the health needs of Roma through a holistic and multi-sectoral approach.

Intersectional inequalities in biomarkers of chronic disease in England

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Background:

Chronic diseases entail huge costs to health services and national economies and significantly affect the quality of life of people who have. Inequalities in chronic diseases are well documented, but less is known about inequalities in (i) biomarkers underlying their incidence (ii) how these inequalities are differentiated according to multiple axes or dis/ advantage which may mutually reinforce or compensate for each other.

Aims:

To map out intersectional inequalities in biomarkers of chronic disease using three national English datasets.

Methods:

The multilevel approach to analysing intersectional inequalities was used, whereby individuals are nested within their intersectional positions/identities. Intersections were defined by combinations of gender, ethnicity, education and income. Age was controlled for. Outcomes were HbA1c, cholesterol, systolic blood pressure, pulse and waist. Findings from understanding Society, the English Longitudinal Study of Ageing and Health Survey for England were compared. Survey data were from 2010-2013.

Findings:

Intersectional inequalities were greatest in waist circumference, followed by cholesterol and HbA1c. They were smallest in systolic blood pressure and pulse. A number of granular intersectional inequalities were observed. Intersectional groups which had the highest values indicating worse health often included more privileged social attributes e.g. medium income and vice-versa. Findings were mostly consistent between datasets, increasing confidence in the results.

Conclusions:

A granular intersectional analysis problematises simplistic notions of inequalities in chronic disease. It is necessary to consider multiple axes of dis/advantage driving such inequalities to both understand them better, and to inform policies and interventions targeted and tailored for specific population subgroups.

The ''problem'' of Roma health and wellbeing: A critical intersectional analysis of European policy perspectives

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Background:

Recent reports suggest large and widening social and health disparities between Roma and non-Roma despite high profile political efforts to redress them. Analysis of this 'policy failure' has so far brought little change in policy approaches.

Aims:

To explore how current representations of the ''problem'' of Roma health and wellbeing have emerged and how they have shaped the actions that have been proposed. We were interested in how the category 'Roma' was constructed and whether this allowed for the multiple identities that might structure inequality.

Methods:

Five oral history interviews were conducted with policy specialists. Policy documents were located through catalogue searches. Analyses explored: 1) the underlying frameworks of thought that shape problem representations; 2) the social categories that are created within these problem representations; and 3) how these categories and representations shaped the solutions that have been proposed.

Findings:

Policies have situated the concern for Roma health within a drive for economic growth. A perception of low productivity is attributed to low educational achievement and subsequently reduced employment opportunities. Inadequate living conditions and low uptake of health care are seen to compound the 'problem' leaving Roma prone to poor health that further limits productivity. The proposed solution is to remove the barriers perceived to prevent Roma from accessing mainstream health, education, employment and housing. Whilst 'gender mainstreaming' is sometimes stated as an aim, there is little evidence of a systematic response to gender equality. Instead, women are seen as part of the solution based on their presumed ability to provide a link to 'close-knit' Roma family structures.

Conclusions:

European policy situates class and ethnicity as key determinants of Roma health. Gender considerations are largely invisible in problem representations although central to proposed solutions.

9.P. Skills building seminar: How to do (and not to do) gender in health research: methods developments and lessons from the field

Organised by: Bielefeld University
Chair persons: Celine Miani - Germany, Melanie Boeckmann - Germany
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There is a growing awareness of the role of gender in the production of health inequalities. Gender, as a social construct, is built on culturally constructed roles, behaviours, expectations, opportunities and responsibilities that individuals experience throughout their lives in societies. It is also a reflection of relations to others, and of the power -or disadvantages- that fall upon individuals. The main channels through which gender influences health status, independently and in relation to a person's biological sex or sexual orientation, include differences in exposure to behavioural and environmental risk factors, differences in use of health services and access to treatment, in relationships that form between care providers and patients, and structural determinants such as the design and implementation of public policies and laws.

Despite efforts to adopt a gender-sensitive approach in public health research, gender remains too often an afterthought in the research process, or gender differences an accidental finding. Investigating the complexity of gender-related influences on health status comes with methodological challenges, considering the multiple dimensions of gender and gender identities and their interactions with the social environment. Grasping the realities of gender-related inequalities in health calls for interdisciplinary approaches and multi-level analyses. In this workshop, we present methodological developments and lessons from the field that highlight the role of gender as a social determinant of health, and suggest ways to operationalise it in health research. Drawing from intersectionality theory, which examines how multiple social identities (e.g. sex/gender, race/ethnicity, socioeconomic position, sexuality, age, (dis)ability) intersect at the level of the individual and the structural factors that underpin them, Mena & Bolte develop a conceptual framework for intersectionality-based gender sensitivity in multivariable analysis. Focussing on the intersection between gender and migration, Wandschneider et al. identify best practice for the conceptualisation and operationalisation of gender in migration-related epidemiological research. Batram-Zantvoort et al. aim to demonstrate the value of identifying discrimination and imbalance of power in obstetric care at different levels of analysis, looking at structural, organisational and individual level factors. Jähn et al. critically examine the theoretical foundations and measurement methods of gender roles. Finally, Böckmann et al. reflect back on a smoking cessation intervention in South Asia and on discovering discrepancies between researchers' assumptions and realities of gender roles and behaviours. Between them, presenters will cover several stages of the research process (conceptualisation, measurement, data collection) and cover a range of disciplines, providing a unique opportunity for dialogue and a platform for the development of best practice.

Key messages:

- This workshop will highlight the role of gender as a social determinant of health, and suggest ways to operationalise gender in health research.
- It will also provide a unique opportunity for interdisciplinary dialogue and a platform for the development of gender-sensitive research best practice.

Conceptual framework for intersectionality-based gender sensitivity in multivariable analysis

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Background:

Intersectionality-based gender sensitivity in multivariable analysis might advance simultaneous consideration of intersecting social positions and identities. Identification and implementation of quantitative statistical approaches that adequately operationalise the concept of intersectionality are currently scarce.

Methods:

An intersectionality-based framework for evaluation of gender sensitivity in multivariable analysis and for future study design was developed. The framework comprises operationalisation of sex/gender, definition of solution-linked variables from a gender mainstreaming perspective, definition and function of intersectional variables and consideration of central gender theoretical concepts. For evaluation of current practice regarding sex/gender sensitivity in intersectionality-informed analyses, a scoping review within selected thematic fields relevant for heath reporting has been conducted.

Findings:

Based on 16 identified intersectionality-informed studies, sex/gender shows to be exclusively operationalised as binary. Solution-linked variables from a gender mainstreaming perspective are rarely taken into account. Sex/gender and race/ethnicity are the only intersectional variables considered in almost all studies, predominantly for stratification or as part of interaction terms. Income, education and employment status as proxies for social position as well as age are mainly used for adjustment in multivariable analyses.

Conclusions:

The framework allows for comparison of gender sensitivity in intersectionality-based multivariable analysis. The project AdvanceDataAnalysis at the Institute of Public Health and Nursing Research, University of Bremen, Germany, will contribute to the detection and analysis of complex interactions from an intersectionality perspective, including the consideration of gender theoretical concepts in multivariable analyses.

Operationalisation of gender and migration in epidemiological research – a systematic review

Lisa Wandschneider

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Background:

Gender as a social construct contributes to determine who migrates and which migration-related risks and opportunities emerge in all phases of the migration trajectory. Simultaneously, migration influences the individual as well as societal definition and perception of gender roles. An explicit gender perspective beyond biological sex in migration-related epidemiological research would contribute to adequately analyse, assess and interpret the health situation of migrants.

Methods:

The systematic review synthesises how gender is conceptualised, operationalised and used for interpretation in migration-related epidemiological research. We search PubMed, Embase, CINAHL, the Cochrane Library, EconLit and PsycINFO as well as the reference lists of the included studies. Eligible studies actively aim to understand, identify or explain the influence of gender on health.

Results:

20 cross-sectional studies met the eligibility criteria. The majority of studies analysed gender effects on mental health (e.g. depression) and sexual health (e.g. risk behaviour). The majority of the study population is made up of male sexual minorities with Latin American background living in the USA. Gender is mainly operationalised through gender roles, attitudes and gender-based discrimination. These dimensions are mostly conceptualised at the individual level, only a minority of studies applies meso- or macro-level indicators to measure structural gender effects.

Discussion:

We identified research gaps with regard to macro-level mechanisms of gender, immigrant populations in Europe and interactions of migration and gender in epidemiological research. The majority is restricted to sex- or sexual orientation related issues, but this systematic review helps to identify good practice examples that may contribute to the development of a guideline on how to integrate a gender perspective in migration-related epidemiological research.

Systematic Review Registration: PROSPERO CRD42019124698

Violation of maternal integrity during childbirth: a micro-, meso- and macrostructural perspective

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Background:

Violation of maternal integrity (VMI) during childbirth is reported by women world-wide and reflects one aspect of gender-related violence against women. Terminology and concepts to describe VMI range from disrespect and abuse over mistreatment in childbirth to obstetric violence. The choice of terms might determine the scope of reference: while mistreatment encompasses rather interactional forms of VMI embedded on a microstructural level of society, obstetric violence includes a critical view on gendered power imbalances and is therefore considering cultural, political and economic exposures situated on macro- and meso-level. To identify different ways of explicitly integrating or implicitly reflecting micro-, meso- and macrostructural dimensions of VMI, we examine terminology, methodology and results in published research.

Methods:

For our review, we chose a meta-ethnographic approach, viewing studies on VMI as primary data in terms of defining, collecting, describing and analysing the phenomena of VMI. Our goal lies in first determining the explanatory model of each study and second synthesising these findings to outline a multilevel framework on maternal integrity.

Findings:

Studies predominantly concentrate on interaction-related determinants of VMI. To integrate macro- and mesostructural factors of VMI within a comprehensive framework, further epidemiological research on structural and social determinants of maternal health as well as interdisciplinary collaboration on the intertwining of gender imbalances in health care is needed.

Conclusions:

By differentiating between macro-to-micro-level factors of VMI, potential causes that go beyond the interaction level (e.g. policy, financial allocation, legal laws, maternal care conditions) can be identified to improve both research and implementation in obstetric care.

A critical discussion of theoretical foundations and measurement methods of gender roles

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Background:

Public health researchers have frequently investigated associations of individual gender role norms or attitudes with a variety of health outcomes. It has been suggested that the construct of gender roles is multidimensional, including norms about gender inequality and gender-related division of labour. Implications of multidimensionality and limitations of applied measurement methods, however, have rarely been discussed critically in published studies.

Methods:

I will summarise theoretical considerations about the multidimensionality of the construct of gender roles. Examples of recently applied approaches to operationalise gender role attitudes in mental health research will be presented. The talk will conclude with a discussion of advantages and limitations of these approaches regarding consistency with theory, applicability, and reduction of measurement error.

Results:

Gender role norms include assumptions about inequality and division of labour in the public and private sphere. Items about gender role attitudes are regularly included in questionnaires of large social surveys and are suitable to explore associations with disease occurrence or quality of healthcare. Data reduction methods such as factor analysis might be applied to differentiate dimensions and to reduce measurement error.

Conclusions:

Shortcomings in considering theoretical foundations and inconsistencies in operationalisation might have contributed to the limited recognition of findings about possible impacts of gender roles on health. We need to advance measurement methods to increase the quality of public health research on gender. Finally, aspects of gender on the contextual level should complement investigations of individual gender roles.

Lessons from the field: Gender roles and researcher reflexivity in smoking cessation in South Asia

Melanie Boeckmann

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Background:

In South Asia, dual epidemics of smoking and tuberculosis (TB) have contributed to a high burden of lung disease. To address these health risks, the TB & Tobacco study uses the TB diagnosis as a teachable moment and implements a behaviour support counselling intervention, conducted by TB health workers, for patients in Bangladesh, Nepal and Pakistan. In this region, smoking tobacco is perceived as problematic for women, and being confronted with questions on smoking from a health professional may be uncomfortable for men and women. Anticipating these challenges, we incorporated gender sensitivity into training of health workers.

Methods:

During implementation of the cessation support in routine TB care, a process evaluation assessed interactions between participants and the intervention through interviews with health workers and patients with TB participating in the cessation program. This presentation focusses on a retrospective self-reflection on how we conceptualized gender roles based on prior research, and how research findings partially challenged these assumptions.

Findings:

While parts of our interview findings point towards smoking as a stigmatized practice for women and some men in South Asia as expected, several male and female respondents across socio-economic and geographical spheres contradicted this assumption. We discovered that health workers' self-efficacy and perceived smoking stigma among health workers influenced whether they discussed smoking with women or minors. Many patients, on the other hand, told us that they were interested in receiving help to cure their TB and were willing to talk to about smoking with their health workers and their family members.

Conclusions:

Patients in this study were more open to talking about smoking than anticipated. When including gender sensitivity into the standard training for health workers, we should be careful not to increase doubts in health workers about addressing smoking with women.

9.Q. Skills building seminar: Building skills and capacity for a future health workforce

Organised by: EUPHA (HWR)
Chair persons: Ronald Batenburg - Netherlands, Ellen Kuhlmann - EUPHA (HWR)
Contact: kuhlmann.ellen@mh-hannover.de

Background:

It is increasingly recognised that there is 'no health without a workforce' and that action has to be taken to develop an integrated and sustainable future health workforce. However, training and education opportunities are lacking for all those engaged in health workforce development. There is an urgent need for health systems and policy to foster skills building and institutional capacity for health workforce development to respond effectively to changing healthcare needs of the population and to the labour market shortages in many countries.

Objectives:

This seminar will address these issues and help reducing the knowledge gaps. The seminar is arranged around for major topics: the WHO framework for action to guide health workforce planning and governance, the competences framework to strengthen the education and professionalisation of public health developed by the WHO Coalition of Partners and ASPHER, the internationalisation of health professional education using medical education in Romania as a case study, and finally a framework for strengthening health workforce research. The seminar aims to help PhD students and early career researchers to develop skills in the field of health workforce research and development. It also provides knowledge and tools for policymakers and practitioners who are responsible for health workforce education and governance. This seminar will promote the development of training programmes for health workforce research and thereby contribute to public health leadership in health workforce development. There will be ample time for discussion and teaching material will be made available for the participants.

Key messages:

- Building skills and institutional capacity is key to improve health workforce research and policy.
- People-centred care and universal healthcare coverage call for new skills and education programmes.

Building institutional capacity for a future health workforce. The WHO Global HRH Strategy

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Background:

There is a growing recognition that the main population health challenges of sustaining universal healthcare coverage (UHC), and responding to the growing non-communicable diseases (NCDs) burden in all countries of the WHO European Region requires that each Member State has an effective, responsive and adaptive approach to human resources for health (HRH). However, there is a worldwide shortage of health workers and the situation is becoming more challenging globally and regionally. This presentation introduces the WHO Framework for Action, which builds on the Global Strategy on Human Resources for Health: Workforce 2030. The aim is to provide guidance to health policymakers, planners, analysts and others with a responsibility for health workforce issues.

Methods:

The WHO Global Strategy was adopted in 2018 by the 69th World Health Assembly. It has identified four strategic objectives, which have been adapted to the regional context as follows: to transform education and performance, to align planning and investment, to build capacity, and to improve analysis and monitoring.

Results:

The WHO Regional Office for Europe is working with Member States across the Region and supporting efforts to achieve sustainable health workforces. This includes promoting the use of the Labour Market Framework approach and maximising the utility of the National Health Workforce Accounts for national use and as a contributor to sustainable human resources for health planning.

Conclusions:

Having a sustainable health workforce in place with the right skills and competencies is critical to making progress towards achieving UHC. Effective implementation of a labour market framework approach, including multisectoral workforce governance, can support effective, responsive and adaptive approaches to human resources for health.

Professionalisation of the public health workforce: why, what and how

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Background:

Member States of the WHO European Region are calling for guidance on how to build the capacity of the public health workforce to help strengthening health systems. The aim of this presentation is to stir the discussion about the professionalization of the public health workforce. Attention is paid to the why, what and how this should be done in countries of the European Region.

Methods:

The European Competency Framework for the Public Health Workforce (Eco-FPHW) has been developed in the framework of the Coalition of Partners, led by WHO European Region, and is one of the pillars of the Roadmap to Professionalizing the public health workforce. The Eco-FPHW primarily relates to the core public health workforce, and that the definition of what constitutes the core public health workforce will differ from one country to the next.

Results:

The Roadmap puts forward several possible levers and measures which include: public health education and training, competencies, formal organisation, credentialing and accreditation, codes of ethics and professional conduct as well as laws and regulations, enumeration and job profiles among others. These measures can be engaged with by a range of stakeholders who have important roles and insights into improving public health. Stakeholders include governments, ministries, national and regional/local health authorities, but also directors of public health training institutions, public health institutes, professional organisations, and employers of the public health workforce.

Conclusions:

The Roadmap provides a guide for all those countries, institutions and organisations wishing to strengthen the delivery of the public health functions and to support the competencies of the public health workforce.

Internationalisation of health workforce education: the case of medicine in Romania

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Background:

Long recognised as a major source country for health professionals working in Western EU Member States, Romania has become increasingly attractive for international medical students in recent years. The current study explores the drivers of this trend, its opportunities and challenges, as well as its implications on the broader health system goals.

Methods:

The study used secondary data analysis and interviews with key informants. Data originated in a study conducted for the OECD (grant no. EC-2017-5304 financed by the European Commission).

Results:

Since 2011, 11 of the 13 Medical Schools in Romania have opened additional study lines in foreign languages (English and French) and gradually increased the number of places allocated to international students. Of all new-entrant student places available in the medical schools in 2018/19, nearly 30% (1740 out of 6121) are in the international study programmes - a 50% increase since 2011/12. Moreover, while the total annual number of places for new medical students have increased by nearly a fifth between 2011/12 and 2018/19 (from 5,250 to 6,121), the share of new study places in the Romanian division has decreased from 80% to 70% in the same period. For Medical Schools, internationalisation has been driven mainly by financial reasons and has had a positive impact on curriculum development and improvement. For many international medical students, in particular nationals of the EU countries, the main push factors are the numerus clausus policies limiting access to medical education in their home countries.

Conclusions:

Internationalisation of medical education in Romania has taken place in the absence of a formal national internationalisation strategy and efforts have not translated into significant improvements in health workforce management in Romania. This suggests that potential benefits of internationalisation of health workforce education must be assessed in context of national health systems.

Researching the health workforce: a framework for action

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Background:

The importance of a sustainable health workforce is increasingly recognised. However, the building of a future health workforce that is responsive to diverse population needs and demographic and economic change remains challenging. There is a need to improve research and education to address these questions effectively and build capacity for public health approaches in health workforce policy. This paper introduces an agenda for health workforce research.

Methods:

The research agenda has been developed through bringing together expertise and knowledge from a wide range of authors and leading organisations involved in health workforce research and policy. It takes a health system approach and focuses on Europe.

Results:

Six major objectives for health workforce policy were identified: (1) to develop frameworks that align health systems/governance and health workforce policy/planning, (2) to explore the effects of changing skill mixes and competencies across sectors and occupational groups, (3) to map how education and health workforce governance can be better integrated, (4) to analyse the impact of health workforce mobility on health systems, (5) to optimise the use of international/EU, national and regional health workforce data and monitoring and (6) to build capacity for policy implementation. The research highlights critical knowledge gaps that currently hamper the opportunities of effectively responding to these challenges and advising policymakers in different health systems. Closing these knowledge gaps is therefore an important step towards future health workforce governance and policy implementation.

Conclusions:

There is an urgent need for building health workforce research as an independent, interdisciplinary and multi-professional field. Action has to be taken to establish new training courses and Master programmes to create competences for leadership in health workforce research.

10.A. Workshop: Transforming four walls into bridges: embracing solidarity via prison health

Organised by: University of the West of England
Chair persons: Nasrul Ismail - UK
Contact: Nasrul.Ismail@uwe.ac.uk

The global population has grown by 20% over the last 15 years. At the same time, the prison population has increased by 30%. Circa 10.4 million people currently incarcerated in prisons worldwide. Despite being an opportunistic setting to gain access to a population at high risk of morbidity, the success of health interventions in prisons varies, while overcrowding and fiscal austerity have intensified the institutional struggle in recent years.

In keeping with the theme of ''building bridges for solidarity and public health'', this interdisciplinary panel of five diverse presentations will deliver a 90-minute workshop on prison health. It aims to examine the following questions: What is the public health approach to imprisonment? How have legal structures contributed to the improvement in prison health across Europe? What interventions work in terms of addressing the health deficits experienced by prisoners? What are the emerging threats to prison health policies and their delivery?

It has been 18 years since a prison health panel was convened at the EUPHA Conference. The time is now ripe for a new, radical investigation into these debates from research, policy and practice perspectives.

From a macro-level perspective, the first presentation will problematise imprisonment from egalitarianism and social justice standpoints, and analyse how health justice is everybody's business. Taking a legal and policy view, the second presentation will explore how the jurisprudence of the European Court of Human Rights over the last 20 years has influenced the international minimum standards on communicable diseases prevention in European prisons.

Drawing upon the meso-level interventions, the third presentation will illustrate how a horticulture programme can provide some antidotes to the high prevalence of violence, self-harm and suicide in UK prisons, by instilling the notion of hope among prisoners. Subsequently, through an analysis of 1,904 prisoners' longitudinal data from a study conducted in the Netherlands, the fourth presentation will articulate the importance of understanding individual and institutional risk factors in respect of prisoners' mental health in order to deliver timely interventions. The final presentation will assess how macroeconomic austerity solidifies prison health efficacy and deepens health inequalities at the micro level.

The majority of the panel members have a strong social media presence. With more than 20k followers on Twitter and Facebook, live updates on the key messages from this panel will be facilitated. Besides responding to conference delegates, the chairperson will field questions from social media platforms to promote an interactive experience.

This panel will reiterate that prison health is at the epicentre of the public health agenda. Giving it such proper deference will acknowledge that prisons are a microcosm of our society and demonstrate our solidarity with a segment of the community that is often excluded.

Key messages:

- This workshop offers the latest research, policy and practice developments on prison health.
- It will stimulate impactful debates in which learning can be adopted by delegates across European countries.

A public health approach to imprisonment

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This presentation explores the contested meaning of ''prison public health''. European Public Health aligns itself with legal, ethical, political and economic principles that govern human rights, the rule of law and social justice. The UN Universal Declaration of Human Rights and the WHO Commission on the Social Determinants of Health infer an egalitarian approach towards social justice that supports rights of all citizens to have their basic needs met, unnecessary threats to wellbeing minimised, and social competence maximised. In the spirit of the WHO Ottawa Charter for Health Promotion, this means operationalising agency of individuals and communities and of the broad structural determinants of health: economic, political, legal and institutional.

In contrast, the law conventionally positions criminal responsibility with the individual perpetrator who is held responsible for their 'offending' behaviour. In parallel, arguments surrounding responsibility for health have abounded for many decades, with the principle of collective responsibility for health forming the ethos of the Ottawa Charter. Only recently has it been acknowledged that criminogenic and pathogenic 'determinants' intersect, criminal risk behaviours and health risk behaviours sharing common aetiologies.

This presentation will reinforce that a public health approach towards imprisonment is fundamentally egalitarian and commitment to social justice, recognising that structure and agency intersect and that the health of the prison is as important as that of the prisoner. It will argue that it is short-sighted to attend only to prisoner behaviour if the system surrounding the prisoner is failing in its duty of care and capacity to serve society.

Most prison populations represent the most vulnerable or disadvantaged sectors of society. Governments must proactively facilitate sustainable human development and protection and empowerment of vulnerable groups including those in custody.

The European Court of Human Rights and the protection of prisoners' health

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The European Court of Human Rights (ECtHR) is a key actor in the regulation of prison conditions at the European level. Before 1998, the ECtHR did little more than legitimate state practice in terms of detention, no matter the effects on the health of those detained. Yet, since 1998, the ECtHR has recognised that prisoners are in a particularly vulnerable situation due to their almost total dependence on the authorities, and has defined a number of positive obligations that States are under to protect the health of prisoners.

Several reasons have been suggested for this evolution. Firstly, in 1998, the ECHR system was restructured and the ECtHR became a permanent court. Secondly, the Council of Europe's enlargement process to the East brought about an explosion in the number of applications from prisoners in post-soviet States complaining about severely inadequate prison conditions and overcrowded conditions. Thirdly, the ECtHR began to work more closely with Committee for the Prevention of Torture (CPT), an interdisciplinary body that looks to make structural changes to prison conditions and focuses on the effects on health to prisoners. In this connection, the ECtHR post-1998 also began to rely more heavily on external standards, such as CPT standards, WHO guidelines, and UN Minimum Standards to supplement its reasoning.

This study examines the dynamics between the ECtHR's normative standards of prison conditions and other international prison health standards by tracking the ECtHR's use of external materials in its assessment of the acceptability of prison conditions. It does so in the context of the ECtHR's jurisprudence relating to tuberculosis prevention, treatment and control in prisons.

Apart from standard improvement, preliminary results demonstrate an increase in the use of WHO documents corresponding with the evolution in the Court's thinking, and indicate that such documents are increasingly recognised as minimum legal requirements for governments to meet.

Nature-based health promotion: a valuable tool in prison partnerships

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In the context of the current UK prison reform agenda and concern about the high incidence of violence, substance misuse, self-harm and suicide, prison-based horticulture can make a significant contribution to the creation of safe, secure, supportive and health-enhancing environments. By joining up health and justice agendas, therapeutic programmes have the potential to serve as powerful catalysts for wider systemic change, tackling inequalities and social exclusion within societies across the globe.

This presentation critically discusses findings from evaluative research, 'Greener on the Outside for Prisons' (GOOP), delivered in prisons in North West England. It aims to illustrate impacts of prisoners' participation in an innovative social and therapeutic horticultural programme. The qualitative study was informed by a theoretical exploration on socio-ecological model of health emphasising interconnections between environment, behaviour and wellbeing, recognising the dynamic interplay between situational and personal factors; by a psychosocial perspective, positioning the individual in networks of interpersonal relationships, organisations, and social, political and economic systems; and by insights from the Biophilia Hypothesis.

Findings suggest that engagement in GOOP were important to improvements in health and wellbeing with wider context-specific benefits. Working across key agendas of health, education and resettlement, GOOP has effectively demonstrated the potential of horticulture to impact positively on mental wellbeing, physical activity and healthier eating.

Additionally, it contributes towards social inclusion through the development of key transferable skills, life competencies, processes of socialisation, and preparation for successful resettlement and employment beyond prison, which are ultimately key determinants of future health and life chances.

The longitudinal course of prisoners' mental health problems during and after imprisonment

Anja J. E. Dirkzwager

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Mental health problems are common in prison populations. Correctional institutions offer an important opportunity to improve prisoners' health, which also benefit the wider public health agenda. At present, little is known about the longitudinal course of prisoners' mental health problems during and after imprisonment. The aims of this presentation are: (a) to examine the longitudinal development of mental health problems in prison and after release; and (b) to identify individual and institutional factors associated with prisoners' mental health problems.

Data are used from the Prison Project, a nationwide and longitudinal study examining 1.904 male prisoners in the Netherlands. Participants were surveyed at various intervals during detention, and 6 and 24 months after their release. Data include detailed longitudinal information on prisoners' self-reported mental health problems, healthcare use, prison experiences (e.g. sentence length, victimisation, receiving visits, and exercise), and background characteristics (e.g. sociodemographic characteristics, financial situation, social support, and personality traits).

Prisoners reported more mental health problems in and after prison than men in the general population. Initial results demonstrate that prisoners who entered detention with pre-existing mental health problems and problematic alcohol and drug use, showed mental health improvements during detention. The high levels of prisoners' mental problems highlight the importance of addressing mental issues in prison and ensuring the continuity of care to support prisoners with their transition into the community.

Impact of austerity on prison health in England: a qualitative study involving national policymakers

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Prisons offer states access to a population that is at high risk of morbidity. The UK austerity policy adopted in 2010 led to a 22% reduction (-£2.71bn) in prison spending by 2017. Whilst the number of prison officers dropped by 30%, the long-term impact of austerity on prison health in England has not been systematically contextualised. This research seeks to articulate the impact of austerity on prison health in England from the perspective of national policymakers.

Semi-structured interviews (X: 66 min) were conducted with 30 key prison policymakers. Constructivist grounded theory was used to assess the impact of austerity on prisoner health in England. Transcripts of 195,680 narrative texts were analysed using NVivo 11 until data saturation was achieved.

As a stealthy political ideology, austerity has caused societal disruption, which disproportionately affects prisons. The lack of access to services offered by the welfare state, including health-related provisions, precipitates societal unrest, increases prisoner numbers, and encourages harsher and longer sentences.

The prolonged constrained funding and the burgeoning population widen health inequalities in prisons. Healthcare provisions become increasingly limited, which unduly affects older and female prisoners who require more complex support. The degrading living conditions and lack of purposeful activities contribute to the increasing violence, self-harm and suicides in prisons, and reorient the healthcare provision from planned services to health emergencies. The excessive focus on Brexit and the perpetual changing political direction imposed on prisons reinforce the system's instability. Despite having the fifth largest economy in the world, England's poorest population continues to bear the brunt of austerity. Initiating a more informed economic recovery policy and considering alternatives to imprisonment would help to ensure that England lives up to its view of itself as a progressive society.

10.B. Workshop: Active participation of migrants, refugees, and ethnic minorities in public health research

Organised by: University of Bern
Chair persons: Thomas Abel - Switzerland, Annika Frahsa - Germany
Contact: annika.frahsa@uni-tuebingen.de

To introduce the relevance, benefits and challenges of participatory approaches in public health research addressing issues of migrant and refugee health. Participation of stakeholders has a long tradition in fields of public health research, in particular in community-based research and health promotion. Today, increasing demands of grant agencies and policymakers in Europe challenge researchers to include stakeholders in all processes of health research. Active participation of migrants and refugees poses complex challenges for public health research including but, going beyond language problems and risks of stereotyping.

The specific objectives of this workshop are: (1) to introduce current approaches for participation and their adaptability for the context of health research with migrants and refugees, (2) to explore participation in three projects that deal with issues like improving quality health care among chronically ill women with immigration background, introducing a health mediator model for refugees as well as ethical issues in participatory research with refugees and ethnic minority groups and (3) to discuss benefits and challenges of participatory approaches intended to improve health and health care services of specific groups.

The workshop will start with an introduction providing a short overview of definitions and key concepts. Substantive presentations showcase three participatory projects in migrant health. A panel discussion, led by experienced moderators, with Prof Thomas Abel (PI of the MIWOCA project presented), Prof Antonio Chiarenza (WHO-HPH Task Force on Migration, Equity & Diversity, member of the Steering Committee of the EUPHA section on Migrant Health), Prof Luis Saboga-Nunes (EUPHA health promotion section) and Prof Sibel Sakarya (Department of Public Health Koç University) will address benefits and challenges of participation in migrant and refugee health research. The panel will open into a discussion to integrate audience's experience and questions on participatory research. The workshop will be closed by the chair's summary of lessons learnt and perspectives for future directions.

Key messages:

- Public health research for and with migrants and refugees poses basic and specific challenges.
- Experience with PR demonstrates the benefits of migrants' and refugees' active participation and the importance of adequate contextualizing of the problems and potential solutions.

Community-based participatory health research: principles and practice

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Community-based participatory research (CBPR) is a collaborative approach to research that aims to improve the health of marginalized communities and reduce health disparities. It starts with a topic of concern for the community and involves iterative cycles of action and reflection to initiate change. Community members are involved as partners and trained as peer researchers to take an active role in the research process. Processes of capacity building and empowerment play a prominent role. As a general principle, participatory research does not primarily focus on health problems, but pays at least equal attention to the resources and capacities of communities. It places a strong focus on developing trust and reciprocity in research relationships.

Regarding methodology, various empirical research methods are used in CBPR study designs, including qualitative, quantitative, mixed-methods and arts-based methods. Arts-based methods such as photovoice, digital storytelling, mapping and drawings facilitate the expression of lived experience, including sensitive aspects, through creative verbal and non-verbal means. These methods expand the available means of expression and as such are highly valuable in research fields where verbal communication is challenged by language barriers and diverse cultural backgrounds as well as sensitive topics and experiences. Participatory health research has been conducted with diverse migrant and refugee groups internationally. Due to legal and other reasons, refugees may be limited in their capacities for participation. The presentation will discuss the strengths and limitations of CBPR including structural obstacles to equitable partnerships.

The co-design approach in the MIWOCA project

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MIWOCA study group

Background:

The project MIWOCA researches how chronically ill women of Portuguese, Turkish and German origin and women without a migration background subjectively experience, understand, interpret and use the Swiss health care system.

Methods:

We conducted 48 qualitative semi-structured interviews with chronically ill women between the ages of 23 and 85 in Bern and Geneva (n = 36 with German, Portuguese and Turkish migrant backgrounds) and n = 12 Swiss women. In addition, n = 12 stakeholder interviews were conducted (doctors, nurses, social workers, psychologists, physiotherapists). In focus groups with interviewed women in Bern and Geneva, results are reflected back, identified topics from the interviews prioritized and representatives named for the cooperative planning. In a participatory planning approach, affected women in the canton of Bern, together with stakeholders from the Swiss healthcare system selected by a systematic stakeholder analysis (e.g. Swiss Medical Association, Red Cross Switzerland, Spitex, Federal Office of Public Health), develop recommendations for improving the quality of care and concrete dissemination strategies.

Results:

Interviewees had multiple and chronic diseases and resulting extensive experience with the Swiss healthcare system. Relevant aspects referred to issues such as quality of specific services, complexity of the healthcare system, costs of care, role of family and social support, and multidimensional stigmatization (migration, chronic illness, alleged overuse of the care system). Findings are incorporated in evidence briefs and narrative stories for focus groups and participatory planning.

Conclusions:

MIWOCA contributes to a targeted and differentiated improvement of structures and options for action in health care for specific groups. Results will be relevant for planning in the health system and may be incorporated into academic teaching and practical training in PH, medicine and social sciences.

Structural and ethical challenges in participatory research with migrant and minority groups

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Based on experiences with participatory research projects with forced migrant and ethnic minority groups in Germany, Israel and Canada, Dr. Gottlieb will first reflect on the structural challenges that especially young researchers face when doing - or intending to do - participatory research. Secondly, she will discuss ethical issues that can arise in participatory research, in particular when grave inequalities, fragmentations and conflicts within the researched communities exist. In such contexts, certain generally valid research ethical questions merit particular attention; e.g. the questions 'Who represents whom?', 'Who gets access to the research process and its benefits?' and 'How are direct and indirect benefits distributed among different community members?' Another set of questions concerns potential discrepancies between common goals in participatory research - such as empowerment, agency, leadership and innovation - and community norms. E.g., what is the risk of participatory research projects intensifying existing internal, e.g. intergenerational or gender-based, rifts and/or getting their practice partners into conflict with their communities and customs? To what extent ought research encourage individuals within a community to "go against the stream"?

In light of (post-)colonial histories and trauma such questions can be especially charged, both politically and emotionally. It is therefore a huge responsibility for the researcher to carefully consider the role of the study within its wider context, to weigh its potential (intended and unintended) effects and broader outcomes on individual and community levels, and to balance them with the study goals and intended benefits and its consequences for health research.

Health mediator model as a way to access to care and health information for Syrian refugees in Turkey

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The number of Syrian refugees residing in Turkey has increased over 200 times since 2012 reaching to 3,621,330 (April 2019). Turkey has granted temporary protection status, including access healthcare in the city of registration. Ministry of Health provides on-site health service in temporary shelters, however more than 90% of the Syrian refugees choose to stay in community settings, which along with language barriers limits their ability to access health care and information.

With UNFPA we have designed a health mediator model to improve access to health care and awareness on priority concerns such as mental health, reproductive health, child health, health system in Turkey and legal status provided to Syrian refugees. This study is a participatory operational research to test the health mediator model. Operationalization took place in 3 phases: (1) selection and training of Syrian health mediators and provincial coordinators; (2) household visits and data collection; (3) evaluation and supervision.

So far, we have trained 174 health mediators from 24 different Turkish cities. Training took 5 days with up to 30 participants each. UNFPA collaborated with NGOs that work with Syrian refugees for coordination purposes. Health mediators made household visits to reach out to Syrian families, gave health education and where necessary support for access to health care services, and conducted a needs assessment. Data collected has been the subject to weekly supervision meetings by local NGOs, health mediators and coordinators to set priorities for the upcoming week.

Health mediator model was effective in reaching out to hard-to-reach groups among Syrian refugees, increased health system and legal awareness, contribute to improved healthcare access and prevention of negative health outcomes such as teenage marriages and pregnancies.

Inclusion of refugees in decision-making and guidance during the implementation of the project was key for project success.

Applying Community Based Participatory Research on sexual health & sexual violence with refugees, asylum seekers and undocumented migrants in Europe and the European Neighbourhood

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Background:

Refugees, asylum seekers and undocumented migrants are at risk of sexual violence (SV). SV can induce ill-health in the victims, their offspring and community. However, prevention and response actions are leaping behind and rarely tap on the agency of the migrants themselves. Community Based Participatory Research (CBPR) is a collaborative research approach in public health that focuses on inequalities and aims to improve the health and well-being of community members by integrating knowledge in action, including personal, social and policy change.

Methods:

Building on the concept of Desirable Prevention from a human-rights and gender-sensitive perspective, in three consecutive projects we applied CBPR to study SV and sexual health (SH) and collegiately developed SV prevention and response tools for personal, social and policy change.

Results:

Each of the three CBPR projects was steered by local Community Advisory Boards composing of key stakeholders. With 1001 Community Researchers being refugees, asylum seekers, undocumented migrants and asylum reception professionals themselves we collegiately conducted the mixed-method research and co-created the tools that were validated at largely attended public seminars and implemented widely. While the projects clearly resulted in social and policy change, several professional researchers personally struggled with the principle of co-learning and co-creation while migrants struggled with the regained respect and identity that fell away beyond project scopes and in between project resulting in poor mental health in some.

Conclusions:

Applying CBPR with refugees, asylum seekers and undocumented migrants on sensitive topics as SV and SH is a valuable research approach. Yet, the CBPR principles of cyclical participatory processes and the commitment to sustainability might clash with the current funding and timing of EU research projects challenging participants' mental health and researchers' ethics.

10.C. Workshop: EUPHA and Europe-wide action on digital public health

Organised by: EUPHA (DH)
Chair persons: Dineke Zeegers Paget - EUPHA, Anna Odone - Italy
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The World Health Assembly Resolution on Digital Health unanimously approved by WHO Member States in May 2018 demonstrated a collective recognition of the value of digital technologies to contribute to advancing universal health coverage (UHC) and other health aims of the Sustainable Development Goals (SDGs). The World Health Organization has just released first ever guideline on digital interventions for health system strengthening.

Et the European level, in June 2018 the WHO Regional Office for Europe launched the WHO/Europe initiative for Digitalization of Health Systems and in February 2019 organized the first Symposium on the Future of Digital Health Systems in the European Region. The European Commission in April 2018 published a Communication on Digital transformation of health and care in the digital single market and requested the Expert Panel on effective ways of investing in health (EXPH) to release an evidence-based opinion on how to assess the impact of digital transformation of health services.

In such context, the European Public Health Association (EUPHA) has at an early stage acknowledged and understood the crucial importance of applying the potential offered by digitalization to public health. Not only its most prominent members work and research as WHO and EC experts on how to plan, implement and evaluate effective digital public health interventions, but EUPHA itself - as umbrella organization representing public health associations and institutes across Europe had: i) actively participated to the WHO Euro Symposium successfully co-organizing a session on the 'beautiful marriage' between digitalization and public health, ii) supported the publication of a EJPH supplement on digital health and iii) has planned to create a EUPHA Section on Digital Health.

With the overall goal of positioning the proposed EUPHA Section on Digital Health in the enriching and constructive context of the European Public Health Conference the workshop specifically aims to:

- present a comprehensive conceptual framework for the application of digital technologies to public health in Europe;
- present and report on EUPHA collaborative action on digital health, aligned with European institutions;
- present the structure and content of the EJPH supplement on digital health;
- present the general aim, specific objectives, scope, mission and preliminary outputs of the proposed EUPHA Section on Digital Health, as well as its synergy with other EUPHA's Section work
- Present the results of two/three specific projects on digital public health to serve as concrete examples of the application of digital solutions to public health
- Engage with the audience to promote the active participation of the broader EUPHA community to the activities of the Section, collect interests and best practices, and share ideas and projects worth scaling up at the Section-level.

Key messages:

- The 'beautiful marriage' between digitalization and public health has to be concretely planned, implemented and evaluated.
- EUPHA action on digital public health can be further strengthened through the collaborative action and work of its dedicated Section.

Presentation of the European Journal of Public Health 2019 supplement on Digital Health

Natasha Azzopardi Muscat

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EUPHA President, and EJPH Editor Natasha Azzopardi-Muscat will present the structure and content of the European Journal of Public Health 2019 supplement on Digital Health

Assessing the impact of digital transformation of health services: Opinion by the Expert Panel on Effective Ways of Investing in Health (EXPH)

Walter Ricciardi

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Objectives, mission, scope and preliminary output of the proposed EUPHA Section on Digital Health

Anna Odone

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Selected examples of succesfull projects on digital public health

Stefan Buttigieg

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10.D. Round table: International capacity building to boost public health: Can we join forces and share know-how?

Organised by: University of Southern Denmark, Babes Bolyai University, Romania
Chair persons: Arja Aro - Denmark, Razvan M Chereches - Romania
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Background:

European Universities are increasingly running or participating in capacity building in higher education in non-EU countries. These projects are funded by EC, US National Institutes of Health (NIH), governments, universities or private sector. Capacity building provides a way to build global bridges between public health communities; it increases cultural understanding, develops resources in the neighboring countries and prevents public health problems spreading to Europe. For the collaborating countries it empowers communities and enhances equity and solidarity. To pool together the expertise and lessons learnt by the universities delivering this kind of education, a roundtable discussion at EUPHA offers a good forum.

Aim:

To create a forum where public health academics, adult pedagogic experts, policymakers and practitioners gather to share experiences, interests and ideas for potential collaboration to facilitate the export of public health training across countries and cultures. Based on this, the round table will increase sharing knowledge and transparency of results of international capacity building interventions and will contribute to the transcultural fertilization of the interventions, with a special focus on solidarity in health. We will present specific ways of how to do knowhow transfer from EU countries to some other parts of the world (Northern Africa, Arabian Peninsula and the Caucasus region).

Program:

An introduction to the roundtable is given by Professor of Public Health Arja R Aro (SDU, Denmark). She will describe recent developments and multiple lines of funding options for international capacity building projects. Professor Razvan Chereches (BBU, Romania) will talk on the lessons learned in an ongoing public health capacity building project among medical faculty staff funded by EC Erasmus+ program in Tunisia. Dr Diana Dulf will present the lessons learned in capacity building projects funded by NIH in Armenia and Georgia in the area of injury prevention. Arja R Aro will tell about the recent and ongoing knowledge transfer and education export projects among undergraduates and health professionals in Saudi Arabia funded by local universities. Pedagogical expert Anne Leena Ikonen will reflect on the pedagogic challenges in capacity building across cultures, using the Saudi Arabian context as an example. After that the panel will discuss the main lessons learnt and challenges encountered, and the audience is invited to ask questions, to share their experiences and interests. The roundtable will finish by discussing options to get organized as a network or interest group around international capacity building in public health, potentially under EUPHA.

Key messages:

- Pooling lessons learnt will help towards better and cost-effective planning of the future training.
- Network or interest group can offer a platform for collaboration and enhancement of European public health training and export.

Capacity building in the field of public health in Tunisia: processes and challenges

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Introduction:

Capacity building activities between 3 Tunisian Medical Faculties (University of Sfax, University of Tunis el Manar and University of Sousse) and 3 European Universities (Babes-Bolyai University, University of Southern Denmark and Trnava University) began in 2017 in the framework of an Erasmus+ project. The aim of the collaboration is threefold: first, Tunisian partners were assisted in developing the infrastructure of the Centre for Evidence into Health Policy (C4EHP); second, EU- Partners delivered the Research into Policy training programme with 3 modules: public health research methods, evidence-based policymaking and health promotion policies. The program consisted of train-the-trainer and train-the-trainee sessions; third, partners are continuously working on strengthening the collaboration between the academic and non-academic sectors in the field of public health.

Lessons learnt:

Developing the C4EHP contributed to the official recognition of the research structure in the partner Universities. The challenges faced were administrative and legislative national procedures and delays in the equipment delivery and instalment. The train-the-trainer sessions empowered the 18 Tunisian participants to acknowledge their importance in the development of the public health field. Knowledge transfer faced challenges due to differences in the culture and working process, adhering to deadlines, communicating via email as well as due to language barriers. The capacities were, however, strengthened when the trainers started teaching themselves and delivered the train-the-trainee sessions. We observed a level of distrust from the non-academic sector due to previous international projects, unrelated with the current project or implementation team, and which had elicited little to no impact. Development of local collaboration between academic and non-academic sectors needs to be explored deeper.

Increase Capacity in Injury Research in Eastern Europe – the iCREATE Project

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Introduction:

Injury rates are highest among LMICs. Many of the leading injury causes are increasing disproportionately in LMICs compared with high income countries. Although medical and public health education in each of these countries has been growing over the last several years, injury and violence prevention has not yet been recognized as a priority. The iCREATE project aims to create a critical mass of injury researchers from multiple disciplines and to engage agencies and stakeholders in conducting high impact research that reduces the burden of injuries and violence in the LMICs of Armenia, Georgia, and Rep. of Moldova.

Progress:

Based on priority needs in our partner countries and the expertise of the training team, the project focuses on: road traffic injury prevention, prevention of violence against women and children and acute care. Although it is the first project of capacity building in injury research implemented in these countries, the partnership builds on and translates existing successful infrastructure. The lead of the project (University of Iowa) has conducted similar projects in other countries from Eastern Europe and one of the training sites (Babes-Bolyai University) is currently a partner in the project.

Activities include skill-building workshops; summer classes; long-term degree-based and professional development training; focused exploratory research projects; and collaborative data infrastructure projects. The focus is on long-term MPH and PhD training in order to build research and leadership skills focused on injury prevention in the partner institutions. Some results of the first three project years are implementation of Injury prevention Curricula in three medical universities from the partner countries, and a Center of Injury and Violence Prevention established in Armenia. Furthermore, 33 trainees were trained, 8 hospitals implemented injury registries and 12446 registry records were collected so far across 3 countries.

Capacity building in public health with two Saudi universities: Challenges of knowledge transfer

Arja Aro

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Introduction:

Collaboration between SDU and two Saudi Arabian (KSA) Universities started in 2012. Case 1 was a new public university for women; the contract (until spring 2017) aimed at knowledge transfer from SDU to two Bachelor of Science curricula (Epidemiology, and Health Education and Promotion). The aim was to train the trainers by teaching the 1st student cohort 100% by the SDU staff and for later cohorts to increase the teaching by local staff gradually. The SDU teams travelled to KSA to run 1-month courses at a time. In Case 2 (ongoing since 2017), 1-week courses for health professionals are offered in an established mixed-gender university; the courses are for a fee.

Lessons learnt:

In case 1, knowledge transfer was challenging, since the local staff was busy ‘with their own courses’ and had low interest to learn from SDU. The SDU and the local group were working as separate teams. The local staff saw knowledge transfer as receiving the slides and other material from SDU. Only in the 5th contract year, interaction started mainly via staff capacity building workshops organized by SDU. The students appreciated the SDU teaching, and on the administrative level collaboration worked very well. Due to the lack of ownership among local teachers and deficits in cultural adaptation on-site, knowledge transfer was not successful.

In case 2, different cultural approaches seem to clash; SDU prefers to market the courses early and e tailor them for the target groups; the Saudi cultural tradition relies less on organized marketing and is flexible with the registration deadlines. For the 1st course, this meant that the SDU team travelled to KSA without knowing who and how many participants had signed up. Learning the background of the participants only when the course started meant that the teaching was finalized from day-to-day while running the course. In the end, based on the course evaluation, the 9 participants were very satisfied with the course.

Experiences and pedagogical considerations of training the trainers in Saudi Arabia

Anne Leena Ikonen

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Introduction:

A student-centered teaching method engages the student to take responsibility for his/her own learning. In this pedagogical approach, the role of the teacher has become to be a supportive coach rather than an authority and one-way superior knowledge provider. A teacher with good teaching skills actively involves and engages students in the learning process. Qualified teacherś competence consists of the substance of the subject taught, pedagogical skills as well as of the teaching experience gained after teacher training.

Lessons learnt:

In our case we organized a 9-day workshop to enhance the teaching skills of teachers in one department of our collaborator university in Saudi Arabia (KSA). The workshop included lectures on-site and individual and group assignments such as integrating active learning methods into teaching. The pedagogical workshop was a part of the cross-cultural knowledge transfer project between SDU and (case 1) university in KSA in the Bachelor level education in 2013-2017. The project disclosed the cultural differences in teaching and learning and the different traditions of education. We found that there was a strong tradition of memorizing among students in KSA, which reflected into the attitudes of both teachers and students.

This workshop was the first pedagogical training for the most of participants and it revealed that they lacked theoretical knowledge on teaching, e.g. the concepts of student-centered teaching were new to the participants. However, they had extensive teaching experience and strong knowledge of the content of the subjects taught. The acquired knowledge of the basic approaches of student-centered teaching expanded participantś thoughts on how they could better interact with students instead of one-way lecturing. In the workshop, dialogue was used as a teaching method, and participants found the sharing of learning experiences in a peer group a useful and new way to learn at work.

10.E. Workshop: Political parties, health and influence in the EU

Organised by: EUPHA (PHPP)
Chair persons: Marleen Bekker - EUPHA (PHPP), Sofia Ribeiro - Portugal
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In light of the 2019 European Parliament elections, signs of a deteriorating public health and the rise of populist radical parties elected in office in some Western countries, this urgent workshop focuses on making sense of the impact of politics on public health.

There is a clear need for in-depth understanding and more effectively engaging with political processes that affect health. Political science articulates the understanding and improvement of the conditions under which politics is able to produce effective and legitimate solutions to policy problems. It involves a systematic inquiry into basic features of the political economy such as institutions, partisanship and the organization of labour markets. Understanding this political landscape of public health helps to define the political options for organizing effective influence on healthy policies and outcomes.

One component in this health political landscape is that of political parties and partisanship. Political parties structure modern politics because they are the teams on which politicians compete for power. They mattered enormously in the post-war years of stable party systems, and their more recent crises and reconstitutions also matter enormously (as a quick look around Western Europe should show). Politicians, and parties, are motivated by the electoral imperative to seek and stay in office. Once elected, politicians on any issue will be looking to claim credit for good outcomes and avoid blame for bad outcomes. If the issue is one that lacks ‘traceability’ such that it produces no obvious credit or blame, politicians will take positions that please their followers and target voters.

This workshop presents five studies on political parties and health, asking the questions ‘Do political parties matter to health? What do political parties talk about when they talk about health? And what do they actually do to health?’ In three studies a health screening was performed on political party manifestos and electoral programmes with additional explorative interviews. Two other studies dive into the academic literature on political parties and partisanship and their presumed effect on health and welfare policies.

After these five presentations the panel, consisting of dr. Natasha Azzopardi Muscat, dr. Holly Jarman and prof Scott Greer, will briefly reflect upon the findings and implications for public health policy and politics. The participants of the workshop will be engaged in an interactive discussion with the panel and presenters focusing on the questions of (a) whether and how, in participants’ home countries, (radical and other) political parties address and affect health and welfare policies; (b) how participants can analyse this themselves; and (c) how they can act upon this evidence.

We end the workshop with five key messages for follow up research and strategy.

Key messages:

- The 2019 European Parliament elections, signs of a deteriorating public health and the rise of populist radical parties provide opportunity and necessity to understand and influence health politics.
- Political party manifesto screening detects possible public health opportunities and threats, but party influence on policies is mediated by party system requirements varying across countries.

A health screening of European political party manifestos to inform priorities and strategies for influence

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Background:

The European Parliament (EP) elections gave way for a new political cycle for the European Union (EU), and thus for public health (PH); an area 70% of the European citizens want the EU to do more on. This research clarifies if and how EU political parties prioritise health and where the gaps are.

Methods:

A literature search was undertaken to 1) gain insight in which sectors the EU can establish policy impacting PH, 2) map actors that play a role in PH policy, and 3) find building blocks for a receptive environment. Four interviews were held with NGOs. Eleven EU political parties' manifestos were thoroughly screened and two interviews were held with MEPs of two different parties.

Results:

Eight sectors were identified in which the EU has (shared) legislative power and can positively impact PH. How these policies are packaged depends on who places their beliefs on the EU agenda. Actors in the political arena such as, parties that will dominate the EP, the Member States, NGOs, and epistemic communities need to make use of building blocks such as trusting relationships, broad and long term coalitions between different actors, and effective translation of expert knowledge, in order to create a receptive environment. In the manifestos health is (in)directly touched upon, but not prioritised. They look beyond the medical sector, but whether plans are meant to be linked to PH improvements is not always clear. MEPs are keen to prioritise health more at EU level, but respect the EU's health competences.

Conclusions:

Health is recognized by parties as relevant in non-medical sectors, which offers positive perspectives for the future, as other EU sectors' policy can impact public health. The agenda-setting of health can be boosted by organizing actors in such a way that they create receptive environments amongst each other.

An analysis of Croatian political parties' pre-election manifestos and healthcare policies

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Background:

Before the regular 2015 Parliamentary elections in Croatia, we identified and analysed topics and comprehensiveness of health policies (HPs) included in political parties' pre-election manifestos. After the loss of government confidence, we did a follow up before the 2016 preliminary elections. Here, we present a comparison of the 2015 and 2016 results.

Methods:

We used the Walt-Gilson policy model for the content analysis of pre-election HPs. Five evaluators independently reviewed manifestos for HPs through four dimensions: content, actors, processes and context. HPs proposed by at least two parties were included in the final analysis and by referring to any of four dimensions for specific HP, parties scored one point (maximum of four points per HP).

Results:

Seven out of the eight parties addressed healthcare topics in their manifestos, six discussed healthcare workforce and financing, while five discussed hospital systems, primary care, medical equipment and (re)organization of the healthcare. Parties earned 41% of all points for describing content, 28% for processes, 17% for actors and 14% for context of proposed HPs. Compared to the 2015 results, most comprehensively approached HPs changed to more focus on workforce and medical equipment. Topics of access to healthcare and people with disability earned significantly less points than in 2015.

Conclusions:

Parties' manifestos in both 2015 and 2016 focused on topics mostly represented in the public discourse on healthcare and daily media coverage. Financing the 2015 elections, as a consequence of a large financial restructuring effort of the hospital system at the time. Health workforce topped the 2016 elections, due to large emigration of health care professionals after legislative changes and Croatia's accession to the EU. Parties mostly focus on the content while they less frequently address the role of processes, actors, and the context needed for successful implementation of the recommended HPs.

Health in the 2018 Italian general election

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Background:

General elections represent a peculiar moment in which clear positions on relevant topics are more likely to emerge. Therefore, they may serve as a reference point to monitor policy development and to verify decision makers' accountability.

The aim of this study is to systematically examine the proposals on health issues in the manifestos of the 38 parties running in the 2018 Italian general election, comparing them with the contents shared on social media.

Methods:

All the electoral manifestos published on the websites of each party and of the Italian Ministry of the Interior were collected and independently assessed by four evaluators.

A list of 48 health themes grouped into 13 main domains into was then consensually created and used to classify the reported proposals.

Parties' official social media accounts (Facebook and Twitter) were subsequently screened for selected keywords to determine the frequency and the content of health-related posts.

Results:

Thirty out of 38 parties included a specific section on health in their programmes or generally addressed healthcare topics. The most covered themes were health promotion and lifestyles, self-sufficiency of fragile populations, management of private healthcare and health workforce, although implementation strategies varied greatly and only in a few cases it was possible to compare them.

On social media, health related posts represented less than 1% of the contents shared by any party during the election campaign.

Conclusions:

In the 2018 Italian election campaign the majority of the parties' manifestos explicitly addressed health issues but, apart from a few exceptions, significant differences were present in the themes and in the proposed solutions, mostly generic. On social media health was almost neglected. Despite its social relevance, health played a marginal role in the 2018 Italian election campaign.

Do political parties matter to health?

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Background:
Do political parties matter to health? Do they affect population health either directly, or through welfare states' social policies and the eligibility, affordability and quality of health systems? And if they do, how? These are crucial questions if we are to understand health politics or shape public health policy, particularly given the changing landscape of both political parties, party dominance in the executive, and the possibly mediating influence of the legislature.

Methods:
This review using a systematic approach examines 107 peer-reviewed articles and books published after 1978 about high-income countries asking the overarching question: Do political parties matter to health and the welfare state?

Results:
As the literature relating parties to health directly was surprisingly thin, the welfare state was used as a 'proxy' variable. An overwhelming majority of the literature sample suggests that Left parties are inclined to expand the welfare state and avoid cutting benefits if possible, while the Right does not expand and tends to reduce benefits. There is an inflection in the 1980s when Left parties shift from expansion to maintaining the status quo.

Conclusions:
Considering current health trends in the form of measles outbreaks, the ''Deaths of Despair'', the return of presumed eradicated infectious diseases and the declining health expectancy rates in some Western countries as well as the rise of PRR parties in office we question the current partisanship thesis that political parties matter less and less.

Populist radical right parties, welfare policy and population health in Europe

Chiara Rinaldi

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Background:
The political system is an important influencing factor for population health but is often neglected in the public health literature. This scoping review uses insights from political science to explore the possible public health consequences of the rise of populist radical right (PRR) parties in Europe, with welfare state policy as a proxy. The aim is to generate hypotheses about the relationship between the PRR, political systems and public health.

Methods:
A literature search on PubMed, ScienceDirect and Google Scholar resulted in 110 original research articles addressing 1) the relationship between the political system and welfare state policy/population health outcomes or 2) the relationship between PRR parties and welfare state policy/population health outcomes in Europe.

Results:
The influence of political parties on population health seems to be mediated by welfare state policies. Early symptoms point towards possible negative effects of the PRR on public health, by taking a welfare chauvinist position. Despite limited literature, there are preliminary indications that the effect of PRR parties on health and welfare policy depends on vote-seeking or office-seeking strategies and may be mediated by the political system in which they act. Compromises with coalition partners, electoral institutions and the type of healthcare system can either restrain or exacerbate the effects of the PRR policy agenda. EU laws and regulations can to some extent restrict the nativist policy agenda of PRR parties.

Conclusions:
The relationship between the PRR and welfare state policy seems to be mediated by the political system, meaning that the public health consequences will differ by country. Considering the increased popularity of populist parties in Europe and the possibly harmful consequences for public health, there is a need for further research on the link between the PRR and public health.

10.F. Workshop: New born screening in neuro-muscular diseases

Organised by: AFM Telethon

In the field of incurable neuromuscular diseases, the access to therapeutics is becoming a reality for some of them and some trials are on the way for the others. More precisely, all recent studies show the more effectiveness of these innovative therapies if administered early or pre-symptomatic stage of these diseases. For example, infant spinal muscular atrophy (SMA) is the most advanced with AMM treatment, several others, including gene therapy, in clinical trials, and three trials of pre-symptomatic administration. This makes this new-born screening a major public health issue with a diagnosis using molecular biology tools.

In this context, the French Muscular Dystrophy Association (AFM-Telethons) and the French muscular disorders network (FILNEMUS) with others associations and partners want to be a force for proposals in this area.

Speakers:
Vincent Laugel
CHU Strasbourg
Christian Cottet Général
Director AFM Téléthon
Jean-François Malaterre
Vice Président AFM-téléthon
Brigitte Chabrol
AP-HM Marseille

10.G. Workshop: SCIROCCO: a tool for accelerating the adoption of integrated care

Organised by: SCIROCCO Exchange Project
Chair persons: Diane Whitehouse - Belgium, Cristina Adriana Alexandru - UK
Contact: Cristina.Alexandru@ed.ac.uk

Integrated care is seen as a solution for addressing Europe's changing demographics and dealing with the fragmented delivery of health and care services affecting numerous healthcare systems.

The SCIROCCO tool is an online participatory tool which helps to facilitate multi-stakeholder dialogues on progress towards integrated care. It does so by:

- Defining maturity to adopt integrated care in terms of the Maturity Model developed by the European Innovation Partnership on Active and Healthy Ageing (B3 Action Group on Integrated Care).
- Assessing the maturity of healthcare systems.
- Assessing the maturity requirements of good practices.
- Supporting twinning and coaching for ‘‘knowledge transfer’’ to facilitate the adoption of integrated care and exchange of good practices.

Knowledge transfer is seen as mutually beneficial for involved regions to access evidence and learn about integrated care. In SCIROCCO, there are two variants of twinning: the first has the aim of transferring a good practice to the healthcare system, while the second is about the improvement of a particular aspect of a healthcare system in order to improve integrated care maturity. Twinning is becoming ever more popular as an approach, and - in 2019/2020 - is being used in a number of European projects.

The SCIROCCO tool was evaluated both quantitatively and qualitatively. Validity and reliability were evaluated using quantitative analyses while usability and perceptions on impact were assessed using questionnaires and focus groups. It was used by more than 60 healthcare organisations in Europe and beyond during 2016-2018. Most recently, it was tested in twinning and coaching activities, which resulted in the development of local Action Plans outlining steps forward on integrated care for the receiving regions.

As part of the SCIROCCO Exchange project, an enhanced SCIROCCO tool is developed. This tool will improve existing knowledge transfer activities by allowing for the easy searching of assets on integrated care from a variety of sources, supporting improvement planning and checking evolution towards plans.

The objectives of this workshop are:

- Presenting the main functionalities of the SCIROCCO tool
- Outlining the results of its overall evaluation
- Discussing the experiences that 2 regions have had with using the SCIROCCO tool for knowledge transfer
- Presenting progress and next steps during SCIROCCO Exchange for an enhanced SCIROCCO tool
- Presenting plans for evaluating the enhanced SCIROCCO tool
- Gathering input from workshop participants on how the enhanced SCIROCCO tool could even better support knowledge transfer in different regions.

Key messages:

- The experience of regions and evaluation results demonstrate the benefits of the SCIROCCO tool for facilitating multi-stakeholder collaboration and learning towards improving integrated care.
- The progress and plans for the SCIROCCO Exchange tool, enhanced with the feedback and suggestions of workshop participants, offer promise for even better support for knowledge transfer.

Introduction to the SCIROCCO online participatory tool and its evaluation

Cristina Adriana Alexandru

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This presentation will first introduce the SCIROCCO and SCIROCCO Exchange projects and the Maturity Model developed by the European Innovation Partnership on Active and Healthy Ageing. Then, a demonstration will be made of the three main functionalities of the SCIROCCO tool: assessing the maturity of healthcare systems, assessing the maturity needs of good practices, twinning and coaching with its two variants. For each piece of functionality, the methodology of using the tool will also be presented. Finally, the two main types of evaluation that were carried out for the SCIROCCO tool, and their results, will be described:

1. Testing the validity and reliability of the SCIROCCO tool. This involved testing the content validity of the B3-Maturity Model through a literature review and Delphi survey, testing structural validity and reliability using quantitative analyses, and testing convergent validity through comparison with another tool that assesses a related concept. Results showed that the content of the wide range of dimensions and measurement scales reflects integrated care maturity, all 12 dimensions contribute to assessing integrated care maturity, the tool has good internal consistency and there is some support for convergent validity.
2. Testing user experience with the SCIROCCO tool. This involved a qualitative approach using questionnaires and focus groups. The findings helped to improve the tool and learn about its potential future uses and wider implications.

Practical experience with SCIROCCO twinning and coaching- the perspective of a transferring region

Andrea Pavlickova

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One of the SCIROCCO twinning and coaching activities was conducted between two healthcare systems: Scotland and The Basque Country. The objective of this presentation is to describe the experience of the transferring region, Scotland. In particular, it will outline the role and engagement of the voluntary sector in the provision of integrated care in Scotland, in terms of:

- Organisation, including the definition of the voluntary sector, its size and stakeholders;
- Engagement of the voluntary sector with integration of care
- Introduction to Carrgomm and its activities (04/09/2018 study visit organised in Scotland)
- Conclusions, lessons learned.

Practical experience with SCIROCCO twinning and coaching- the perspective of a receiving region

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One of the SCIROCCO twinning and coaching activities was conducted between two healthcare systems: Scotland and The Basque Country. The objective of this presentation is to describe the experience of the receiving region, the Basque Country. In particular, it will outline the role and engagement of the voluntary sector in the provision of integrated care in the Basque Country, in terms of:

- Organisation, including the definition of the voluntary sector, its size and stakeholders;
- Engagement of the voluntary sector with integration of care
- Motivation for the knowledge transfer activity with Scotland
- Objectives of twinning, potential benefits of the knowledge transfer activity
- Feasibility and required adaptation for the transfer
- Priority actions, main learnings
- Conclusions, lessons learned

Steps forward for the SCIROCCO tool and its evaluation as part of SCIROCCO Exchange

Stuart Anderson

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The ambition of the SCIROCCO Exchange project is to maximise the value and impact of the B3-Maturity Model and the SCIROCCO tool. To this aim, SCIROCCO Exchange will develop an enhanced tool including a Knowledge Management Hub. The first objective of this presentation will be describing the progress and plans towards this enhanced tool.

The SCIROCCO enhanced tool will support measures for scaling up integrated care, and an important part of it will involve building cross system community to facilitate transfer and scaling. Through its Knowledge Management Hub, the enhanced tool will include the capacity to integrate knowledge from highly relevant sources of information on integrated care practice and advice. To support and augment twinning and coaching activities, it will allow the searching for, combination of this knowledge and its adjustment to the maturity levels of health systems and the maturity requirements of good practices. The enhanced tool will also support the tracking of the evolution of the maturity of the health systems and the maturity requirements of good practices, which will allow the development of further functionality for improvement planning and monitoring.

The second objective of this presentation will be outlining progress and plans towards the evaluation of the enhanced SCIROCCO tool. This evaluation will focus on the assessment of the enhanced tool's personalised knowledge transfer and capacity-building support. It will provide feedback on the processes of knowledge transfer and capacity-building support, and help conclude on the key mechanisms supporting these processes. Moreover, this evaluation will feed into the development of Improvement Plans in the 9 SCIROCCO Exchange regions. The ultimate goal of this evaluation is to optimise the potential of the enhanced SCIROCCO tool as a key facilitator and integrator of knowledge transfer and capacity-building support for integrated care.

Discussion and dialogue on steps forward for the SCIROCCO tool

Diane Whitehouse

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The objective of this presentation is to inspire input from workshop participants about how the enhanced SCIROCCO tool could even better support knowledge transfer in different regions. Participants will be encouraged to reflect on what the tool can do for them, how they can help to shape its content, and to ask questions of their own. List of suggested questions:

- What do you think about the tool as it stands today?
- Can you see ways of using the tool in your region/ on your site?
- What do you think about the plans to expand the tool as part of the SCIROCCO Exchange project?
- Would you be willing to get involved in shaping and enhancing the tool?
- Would you be willing to get involved in expanding the tool's use further? Could you use the tool for any twinning and coaching?
- Do you have any suggestions for improving the functionality of the tool?
- What are your opinions about the proposed way of evaluating the enhanced SCIROCCO tool?
- Do you have any suggestions for improving the evaluation?
- How would you get more involved in SCIROCCO Exchange?

10.H. Workshop: Social Cost-Benefit Analyses in Public Health

Organised by: Netherlands National Institute for Public Health and the Environment
Chair persons: Ardine De Wit - Netherlands, Paul Van Gils - Netherlands
Contact: paul.van.gils@rivm.nl

Economic evaluation in health care has a long-standing tradition in Europe, especially in the United Kingdom and the Netherlands. The incorporation of economic evaluations in resource allocation decisions is increasingly becoming embedded in national guidelines.

In other fields, however, the social cost-benefit analysis (SCBA) framework has been used for a vast period of time, especially in fields such as logistics or transportation. A social cost-benefit analysis (SCBA) evaluates the favorable and adverse effects of policy actions and the associated opportunity costs of those actions. The favorable effects are defined as the benefits, and the opportunities foregone are defined as the economic costs. The SCBA provides an overview of all effects, risks and uncertainties of a policy, and the resulting advantages and disadvantages for society as a whole. By quantifying and monetary valuing these advantages and disadvantages as much as possible in Euros, the SCBA provides insight into the impact of the measure on social welfare, expressed as the balance of benefits (in Euros) minus the costs.

In 2013, Dutch guidelines were developed for the proper and standardized execution of SCBA of future policies in public health. Building on this increased awareness, in 2014, the National Institute for Public Health and the Environment (RIVM) published reports on SCBA for prevention and care. Since then, a few SCBA's have been published which evaluated various regulatory policies.

The aim of this session will be to elaborate on 1) the SCBA methodology and to provide a brief introduction to methodological aspects (no abstract provided); 2) a SCBA to evaluate the consequences of Cognitive Behavioral Therapy for alcohol and cannabis addiction; 3) a SCBA to evaluate the consequences of tobacco control policies; and 4) a SCBA to evaluate the consequences of three policies to limit alcohol use; and 5) a SCBA to evaluate the consequences of two interventions to prevent toxoplasmosis.

Key messages:

- SCBA is a fairly new method in health care to map the consequences of long-term policy measures.
- With the help of an SCBA it is possible to indicate who pays for and who benefits from an intervention.

The SCBA methodology and to provide a brief introduction to methodological aspects

Ardine De Wit

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Introduction of the method of a Social Cost-Benefit Analysis based on the workshop abstract.

Social cost-benefit analysis of Cognitive Behavioral Therapy for alcohol and cannabis addiction

Eelco Over

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Background:

A considerable number of people with an alcohol or cannabis addiction currently do not receive addiction care. Some hundreds of thousands persons in the Netherlands suffer from alcohol dependency, while some tens of thousands adolescents suffer from cannabis addiction.

Methods:

A (hypothetically) enhanced uptake of CBT in specialized addiction care centers was modeled using the SCBA approach. Two SCBA's were performed: one with respect to alcohol addiction and the other regarding cannabis addiction among adolescents.

Results:

Per person treated with CGT, these benefits accumulate to about 12,000 euro (range 10.000 - 14.000 euro). These profits originate from improved health and less mortality, improved quality of life and higher productivity. A decrease in the number of persons with an alcohol addiction will also lead to lower costs for police and justice following from less criminal activities. Furthermore, CGT is effective as treatment for adolescents with cannabis addiction. Per person treated with CGT, societal benefits accumulate to about 11.000 euro (range 9.700 - 13.000 euro). Here, the net benefits arise from improved health, improved quality of life, reduced early school leaving and higher incomes for those clients who have successfully participated in CGT in addiction care.

Conclusions:

This study shows that society can benefit from an increase in people treated with CGT in specialized addiction care. Such an increase in number of people treated could for instance be realized by educational programs for professionals who come across people with dependency problems, such as general practitioners, professionals working in emergency care and youth care.

Social cost-benefit analysis of tobacco control policies in the Netherlands

Paul Van Gils

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Background:

In the Netherlands approximately 23% of the population of 15 years and older smokes. The main research questions were to identify what social costs- and benefits can be expected when various tobacco control policies would be implemented in The Netherlands, how do costs and benefits change over time, and which sectors in society could expect to incur costs and in which sectors accrue profits.

Methods:

A SCBA was conducted using a combination of the Chronic Disease Model developed by the National Institute for Public Health and the Environment (RIVM), the SimSmoke model and a specially designed excel model. Policies included both tax increases (i.e. increase of excise tax on tobacco of 5% or 10% each year) and a policy package as proposed by the World Health Organization (i.e. including mass media campaigns and mediabans).

Results:

When no new policy measures are implemented, the prevalence of smoking will decrease by 2.3 percentage points over the next 35 years. The policies reviewed in this report have the potential to decrease smoking prevalence by 14.2 percentage points (and in a 'smoking-free society scenario, by as much as 17.4 percentage points). Furthermore, the results show that the intervention costs for all scenarios are minimal, and that investing in health is beneficial as seen from both the public health and fiscal perspective.

Conclusions:

This study demonstrated that reducing the prevalence of smoking has beneficial effects for various stakeholders within the Dutch society: such as employers (e.g. increased productivity) and consumers (e.g. increase quality of life).

Social cost-benefit analysis of regulatory policies to reduce alcohol use in The Netherlands

Ardine De Wit

GA de Wit[1], PF van Gils[1], EAB Over[1], AWM Suijkerbuijk[1], J Lokkerbol[2], F Smit[2], WJ Spit[3], SMAA Evers[4], RJA de Kinderen[4]
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Background:

If all costs and all benefits of alcohol use are expressed in monetary terms, the net costs were 2,3 to 4,2 billion euro in 2013. Examples of the costs of alcohol are less productivity at work, costs of police and justice and traffic accidents.

Methods:

In this study three regulatory policies have been modelled using the Social Cost-Benefit Analysis (SCBA) approach. Regulatory policies aimed at curbing alcohol consumption were (1) an increase in excise taxes, (2) a reduction of the number of sales venues, and (3) a total mediaban for advertising alcohol.

Results:

In the long run, over a period of 50 years, an increase in excise taxes of 50% will result in societal benefits of 4.5 to 10.7 billion euro, an increase of excise taxes of 200% will result in societal benefits of 12.2 to 35.8 billion euro. The societal benefits of closure of 10% of sales venues are estimated at 1.8 to 4.3 billion euro after 50 years, and at 4.6 to 10.7 billion euro when 25% of sales venues would be closed. The societal benefits of a mediaban would amount to 3.5 to 7.8 billion euro after 50 years, but this estimate is surrounded by uncertainty.

Conclusions:

Regulatory policies aimed at reducing the amount of alcohol consumed, such as a further increase of excise taxes, a reduction of the number of sales venues and a total mediaban, will result in savings for society at large. However, costs and benefits are spread unequally over the different stakeholders.

A social cost-benefit analysis of two One Health interventions to prevent toxoplasmosis

Anita Suijkerbuijk

AWM Suijkerbuijk[1], EAB Over[1], M Opsteegh[1], H Deng[1], PF van Gils[1], AA Bonacic Marinovic[1], M Lambooij[1], JJ Polder[1], TL Feenstra[1], JWB van der Giessen[1], GA de Wit[1], MJ Mangen[1]
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Background:

In the Netherlands, toxoplasmosis ranks third in disease burden among foodborne pathogens, with an estimated health loss of 1,900 Disability Adjusted Life Years and a cost-of-illness estimated at €44 million annually. We performed a Social Cost-Benefit Analysis (SCBA) to evaluate the net value of two potential interventions, freezing meat and improving biosecurity in pig farms, for the Dutch society.

Methods:

We assessed the costs and benefits of the two interventions and compared them with the current practice of education, especially during pregnancy. A 'minimum scenario' and a 'maximum scenario' was assumed, using input parameters with least benefits to society and input parameters with most benefits to society, respectively.

Results:

The freezing meat intervention was far more effective than the biosecurity intervention. Despite high freezing costs, freezing two meat products: steak tartare and mutton leg yielded net social benefits in both the minimum and maximum scenario, ranging from €10.6 million to €31 million for steak tartare and €0.6 million to €1.5 million for mutton leg. The biosecurity intervention would result in net costs in all scenarios ranging from €1 million to €2.5 millions.

Conclusions:

From a public health perspective (i.e. reducing the burden of toxoplasmosis) freezing steak tartare and leg of mutton is to be considered.

10.I. Workshop: Bridging disciplines, sectors and systems for interdisciplinary research on antimicrobial resistance

Organised by: University of Bielefeld
Chair persons: Kayvan Bozorgmehr - Germany
Contact: victoria.saint@uni-bielefeld.de

Antimicrobial resistance (AMR) is one of the biggest contemporary threats to global health, food security and development. AMR is associated with longer illness, higher mortality and higher health care costs, and threatens the success of many disease interventions including surgery, chemotherapy and the fight against HIV, TB and Malaria. The risks and impacts of AMR are truly universal and global, putting everyone at risk across demographic, socioeconomic and geographic boundaries.

AMR is a ''wicked'' problem driven by a range of complex, structural and interconnected factors, including in sectors related to human health, animal health, agriculture and the environment. Research on AMR is therefore needed not only from, but which bridges across, diverse disciplines including biomedicine, public health and the environmental, animal, social and political sciences. Despite calls for coordinated action on AMR, traditional siloes between sectors and disciplines, and from research to practice, remain difficult to bridge. Many efforts have strengthened communication and coordination but remain essentially focused on ''drugs and bugs'', stopping short of achieving the type of radical, integrative and trans-border (disciplinary, sectoral, national, etc) collaboration needed to explore and effectively tackle this complex challenge.

The goal of this workshop is to create a space for dedicated discussion between professionals from diverse disciplines, sectors and settings to explore the following questions:

- What key questions or challenges for understanding and tackling AMR (from a research, policy or practice perspective) need to be explored using an interdisciplinary research approach?
- What thematic intersections, tensions and synergies exist between different disciplines conducting research on or relevant to AMR? What different theoretical perspectives and methodological approaches can be brought together to answer such questions?
- How can we create bridges and strengthen solidarity between professionals in different disciplines, sectors and stakeholder groups to foster the type of systematic, inter-/trans-disciplinary research needed? How can we ensure the knowledge generated informs evidence-based policy and practice to effectively and equitably tackle AMR?
- What initiatives for inter-/trans-disciplinary research on AMR have been effective and what can be learned to inform future research?

Following a brief introduction of key concepts and objectives, two presentations will provide input from research on the macro-structural drivers of AMR, which demonstrate the importance and value of different disciplinary research on this topic. A third presentation will explore equity and gender considerations in tackling AMR. The subsequent discussion will examine the above questions by tapping into the expertise, experience and perspectives of the presenters and participants. The workshop will close with a summary of lessons learnt and directions for future research.

Key messages:

- New forms of inter- and trans-disciplinary, translational research are needed to understand the complex drivers and dynamics of antimicrobial resistance and how to address this major global threat.
- Meaningful exchange is needed to identify concrete ways to overcome the methodological, practical and other challenges to conducting systematic, inter-/trans-disciplinary research on AMR.

Using a cultural contexts of health approach to address the challenge of antibiotic resistance

Katie Ledingham

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This presentation will provide an overview of key findings from a 2019 policy brief published by the WHO Regional Office for Europe using a cultural contexts of health approach to address the global health challenge of antibiotic resistance (ABR; see publication http://www.euro.who.int/en/publications/abstracts/antibiotic-resistance-using-a-cultural-contexts-of-health-approach-to-address-a-global-health-challenge-2019). It will delineate what a cultural contexts of health approach is and why it matters for tackling the contemporary threat of ABR. It is now increasingly recognized that the systematic neglect of cultural factors is one of the biggest obstacles to achieving better health outcomes and better standards of living worldwide. Using a cultural contexts of health approach, the presentation will describe how the prescription and use of antibacterial medicines, the transmission of resistance, and the regulation and funding of research are influenced by cultural, social and commercial, as well as biological and technological factors. The presentation will demonstrate how culture can serve as an enabler of health and provides new possibilities for change.

Applying a One Health approach to inter- and trans-disciplinary research on antimicrobial resistance

Timo Falkenberg

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This presentation will focus on the value and process as well as the opportunities and challenges of applying a One Health approach to conduct inter- and trans-disciplinary research on antimicrobial resistance (AMR) based on experiences in the Forschungskolleg (graduate school) ''One Health and urban transformation'' (https://www.zef.de/onehealth.html), hosted at the Center for Development Research in Bonn. The One Health approach acknowledges that human health is inextricably intertwined with animal health and the environment and that solutions to health issues can only be achieved by close collaboration and integrated approaches of those three domains. In the complex context of AMR, One Health is often mentioned as one promising way forward for managing and mitigating the approaching health crisis due to its inherent holistic and interdisciplinary nature. The presentation will provide an overview of inter- and trans-disciplinary research around One Health and AMR from the Forschungskolleg thereby exploring enabling factors and obstacles encountered.

Exploring equity, social determinants of health and gender considerations for antimicrobial resistance

Victoria Saint

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This presentation will focus on three aspects related to the equity, social determinants and gender considerations relevant to AMR. The presentation will begin with a general description of how structural forces and socioeconomic inequities can result in specific population groups in society having differential exposure and vulnerability to AMR as well as suffering differential social, economic and other consequences and impacts from the associated ill health. Secondly, will be an explanation of the how the application of conceptual frameworks and approaches on equity, social determinants and gender on can shed valuable light on the specific pathways and mechanisms through which these patterns arise, and how these factors may influence the effectiveness of any initiatives and interventions aimed at tackling aspects of this global health challenge. The presentation will conclude by providing an overview of the emerging results from a scoping review on the gender, equity and social determinants considerations for tackling AMR and promising directions for inter-/trans-disciplinary research on this theme.

10.K. Workshop: Terrorist attacks and aftercare

Organised by: EUPHA (PMH)
Chair persons: Jutta Lindert - EUPHA (PMH), Johan Bilsen - Belgium
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In recent years several European countries have been confronted with terrorist attacks. Since the Oklahoma City Bombing in 1995, there has been a growing evidence of trauma-research showing that survivors and witnesses of such attacks not only are affected physically, often with serous injuries, but also often experience severe mental health problems, such as PTSD, depression, or anxiety, which can take months or years to fade away. Moreover, such impact not only affect directly involved, but also indirectly involved persons (e.g. relatives of victims) and even the broader population. Terrorism has become a public health issue, challenging researchers to profoundly study determinants of terrorism as well as the ways of how to organise and install adequate preparedness before and proper responses and effective healthcare for populations in need after an attack.

Until now, aftercare for people directly or indirectly affected by terrorist attacks and for the broader population gets rather little scientific attention. How did the health care services respond to such attacks? How should they respond and why? Were these services adequately prepared? Have survivors sought out help themselves? While there is an increasing body of knowledge on the association between a terrorist attack and PTSD, depression or other mental health problems, there is little known on the psychological aid that was given, and to whom this was given.

In this workshop, research findings on aftercare after terrorism will be presented and discussed. Four researchers from three different European countries confronted with terrorist attacks in recent years (France, Belgium and Norway) will present their findings. Dr. Cécile Vuillermoz will present data on the immediate and long-term aftercare for civilians following the attacks on Charlie Hebdo in January 2015 in France, while Dr. Stephanie Vandentorren will present data on the psychosocial aid provided to directly exposed, witnesses and relatives after these attacks. Drs. Roel Van Overmeire will focus on the psychosocial aid offered to rescue workers shortly after the attacks in Belgium, and the months and years after. Finally, Dr. Lise Eilin Stene will give a presentation on current problems of healthcare in Europe in reaching those inflicted by terrorism and other traumatic events, while pointing to solutions and challenges for the future.

Key messages:

- More research is necessary to find adequate ways of reaching vulnerable people in need of psychosocial aid after terrorist attacks.
- More scientific insight is needed in the mental health impact of and the proper psychosocial aid response after large-scale traumatic events, in the direct aftermath as well as in the long term.

Psychological follow-up and its perception in civilians involved in the January 2015 terrorist attack in Paris, France

Cécile Vuillermoz

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Background:

A terrorist attack occurred in Paris in January 2015 against the staffs of the Charlie Hebdo magazine and a kosher grocery. This study examined the psychological follow-up and the non-satisfaction of the people civilians involved in the terrorist attacks.

Methods:

The IMPACTS survey, an open cohort study of civilians involved in the terrorist attacks was conducted 6-10 (wave 1) and 18-22 months (wave 2) after the attacks. Psychologists interviewed in face-to-face 190 civilians in wave 1 and 123 of them participate to the wave 2. A questionnaire was used to collect data on socio-demographic characteristics, exposure level, social support, psychological support and perception, impact on work and social functioning, and mental health disorders.

Results:

In wave 1 (N = 190), 24% of participants had initiated a regular follow-up with a psychologist or a psychiatrist. Reasons of non-follow-up were: they had refused because they did not feel the need or they did not want to talk about it (60%), it was not suggested to them (30%), or they have already had a follow-up before (12%). In wave 2 (N = 123), 25% had a regular follow-up with a psychologist/psychiatrist since the events, 22.0% had had a follow-up but not anymore in wave 2, 15% did not have a follow-up in wave 1 but they had in wave 2 and 38.2% never had. Psychological aid from professionals for resilience has not been appropriate for 32% of the participants at 6 months and for 39% at 18 months. In both waves, non-satisfaction of follow-up was more frequent among witnesses than with those who were directly exposed.

Conclusions:

Six months after the January 2015 terrorist attacks in Paris, among the participants without psychological follow-up, it was not offered to nearly a third of participants. In order to enhance resilience, psychological aid should also be provided to those who have not been directly exposed.

Main message:

Psychological follow-up should be provided to all civilians in short and long-term.

Psychological support in short term after the January 2015 terrorist attack in Paris, France

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Background:

A terrorist attack occurred in Paris in January 2015 against the staffs of the Charlie Hebdo magazine and a kosher grocery. This study examined psychological support given to the people directly exposed, witnesses and close relatives of those who were injured, hostages or died.

Methods:

The IMPACTS survey was an open cohort lead in 2 waves (6 and 18 months after the events). Psychologists interviewed in face-to-face 190 civilians in wave 1. A questionnaire was used to collect data on socio-demographic characteristics, exposure level, psychological and social support, impact on work and social functioning, and mental health disorders.

Results:

Among the 190 participants in wave 1, 24.3% did not receive psychological support neither in 48 hours, between 2 and 7 days, and after 1 week. Among those who had received support, they had a contact in average with 3 institutions or associations. Within the 48 hours, psychological support was mainly provided by Medico-psychological emergency unit (CUMP) (45.2%). Between 2 and 7 days, CUMP (42.6%) and a Parisian hospital in specialized care unit for trauma (44.6%) had mainly offered psychological support. One week after events, psychological support was mainly provided by consultation in specialized care unit for trauma (41.4%) or in ambulatory (27.6%). Lack of psychological support was more frequent among men, unemployed, and witnesses (versus those who were directly exposed).

Conclusions:

This study suggests offering psychological support to the whole population that have been potentially impacted, and also for those who had not been directly threatened. Long-term psychological follow-up of the most affected ones remains an objective to consolidate initial care.

Main message: Psychological follow-up should be provided not only to threatened people but also to the most vulnerable people (unemployed).

Psychosocial aid provided to and sought by rescue workers after the March 2016 terrorist attacks in Brussels, Belgium. A qualitative analysis

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Background:

During the terrorist attacks of 22/03/2016 in Brussels, Belgium, hundreds of rescue workers were present or came to the sites to give aid to the victims. However, until now, there is little research about these first responders' own need for aid and support immediately after their work or later, and about how they experienced that aid.

Methods:

Using half-structured interviews, we collected data from 31 first responders including 4 nurses, 5 soldiers, 7 firefighters, 11 airport police officers and 4 Red Cross volunteers. Interviews were transcribed, coded and analyzed by two researchers.

Results:

Generally, debriefings were organized at hoc, informal and at the day of the event. Sometimes, an additional group conversation was organized in the week or weeks later. Further initiative was left to the rescue workers themselves to find psychosocial aid, whether inside or outside their organization. Because of many contextual factors (macho culture, no sense of normality of reactions on traumatic experiences, (lack of) social support, stigma of psychosocial health, lack of understanding of those who did not experience it...) rescue workers (mostly police officers and soldiers) often did not find the necessary psychosocial aid. Some workers simply accepted that they have changed due to the attacks. Those who did search for psychological help, experience several problems: the type of help, the financial costs, a lack of recognition of the psychosocial problems, etc.

Conclusions:

Psychosocial aid of first responders is often too short-term, ad hoc, and poorly prepared and organized. Awareness of adverse changes in health or personality can come long after the debriefing sessions. Furthermore, the quality of the debriefings is not always up to standard.

Main message:

Psychosocial aid must not only be aimed at the short term, and must be better prepared and organized.

Research under Attack: A Framework for Prospective Cross-European Research in the Wake of Terrorism

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This presentation will propose a framework for prospective cross-European research study that may provide unique knowledge about the health effects of terror attacks and the challenges they impose to the health services. Terror attacks devastatingly affect individuals and societies worldwide. Unfortunately, unmet needs are frequently reported by those impacted. How to design and implement efficient psychosocial care, and reach affected individuals and communities, is a challenge for researchers, clinicians and policy makers alike. There is an urgent need for coordinated efforts to develop scientifically based guidelines for psychosocial support and health services after terrorism, and thus strengthen our public health preparedness to such events. Examples will be given on how accurate register-based and administrative claims data on primary and secondary health service utilization before and after attacks can be linked with terror-exposed individuals' own reports of their perceived health, social support and other factors that are important to consider in the planning and implementation of post-attack healthcare. Cross-country comparisons may provide new insight about cultural, structural and organizational factors that may impede or promote coherent patient pathways in the wake of terror attacks. A long-term goal is to develop a sound research methodology that allows for international comparisons of healthcare delivery in the context of different types of trauma. During the presentation, methodological challenges in current trauma-focused studies and suggestions for strengthening future research concerning healthcare to trauma-exposed populations will be discussed.

10.L. Workshop: Real-world data: are we ready to take up the challenge?

Organised by: EUPHA (HTA), EUPHA (EPI)
Chair persons: Chiara de Waure - EUPHA (HTA), Stefania Boccia - Italy
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Evidence provided by traditional clinical research often fails to answer patients', physicians' and healthcare decision-makers' questions about real-world practice and outcomes; in fact, real-world effectiveness may considerably differ from efficacy assessed in clinical trial settings. The rise of interest in real-world data (RWD) - data routinely collected outside a controlled research environment - is driven by the increasing need for evidence in specific populations, such as comorbid or multi-treated people. RWD can also allow investigation of unanticipated, uncommon or long-term outcomes. In addition, RWD may represent the only source of information in some fields of special interest, e.g. rare diseases. Furthermore, current conditional reimbursement systems of drugs require dynamic evaluations of cost-effectiveness that have necessarily to take RWD into account. Indeed, RWD play a relevant role also in Health Technology Assessment (HTA) projects that should release the most up-to-date evidence and should be updated once new data are available. Nonetheless, common concerns about evidence derived from RWD include uncertainty about data quality, high possibility of bias, difficulties in managing a vast amount of data coming from different sources as well as legal and privacy requirements, in particular in the light of the new General Data Protection Regulation. However, HTA cannot exempt using RWD as it is entrusted to assess short- and long-term consequences of the application of health technologies, in terms of both health outcomes and costs. This workshop is an opportunity to discuss current and future challenges in the use of RWD in HTA and concerns preventing researchers from exploiting RWD full potential.

Key messages:

- Real-world evidence and randomized control trial data are considered mutually complementary in generating evidence and supporting decision-making.
- Real-world data have proved to be crucial as instrument to gather data in HTA and to support decision-making.

Call for a European collaboration in the use of Real World Data in Health Technology Assessment

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Issue/problem:

Modern patient care requires a heavy investment in innovative health technologies while at the same time it is facing a fiscal sustainability challenge in the health care system. Evidence on effectiveness of health technologies informing Health Technology Assessments (HTA) have traditionally been based on randomized control trials (RCTs). However, RCTs are expensive and the external validity is relatively low which makes it difficult to assess effectiveness and long-term outcomes in clinical practice especially in diverse populations.

Description of the problem:

Real-World Data (RWD) studies use observational data routinely collected to gather information on the delivery and outcome of care. RWD studies cost less than RCTs and are considered to have a high external validity. Results from RWD studies are therefore a good supplement to support evidence from RCT in HTA-reports. However, RWD are not still fully used in HTA. This is partially due to concerns about data quality and accessibility.

Effects/changes:

In order to provide a deeper insight into how health technologies are working in real-world settings across Europe, it is time to systematically including RWD in HTA. A first step should be to call for a European collaboration to map relevant sources of RWD that can be used in HTA and define the quality and main format, in which they can be analysed and used. Common legislations and guidelines regarding which RWD should be accepted as sources of information for HTA should be elaborated.

Lessons:

Through a European collaboration, the quality and accessibility of RWD should be secured in order to use evidence from RWD studies to inform HTA on effectiveness of health technologies.

Can we rely on non-randomised studies? Findings from a meta-epidemiological review

Maximilian Salcher-Konrad

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Background:

Increasingly, health technology assessment (HTA) agencies must decide whether new medicines should be used routinely in the absence of randomised controlled trial (RCT) data, relying solely on non-randomised studies (NRS), which are at high risk of bias due to confounding. Against the background of increased availability and improved methods to analyse non-randomised data (e.g., propensity score methods and instrumental variables), it is important for decision-makers to have guidance on the analysis and interpretation of NRS to inform health economic evaluation. We therefore aimed to systematically and empirically assess the performance of NRS using different analytical methods as compared to RCTs and develop recommendations on the basis of our findings.

Methods:

We conducted a large-scale meta-epidemiological review to obtain estimates of the discrepancy in treatment effects in matched RCTs and NRS of pharmacologic interventions from published meta-analyses indexed in MEDLINE and the Cochrane Database of Systematic Reviews. We also consulted with HTA bodies, regulators and academics from five European countries to learn from their experience with using non-randomised evidence.

Results:

We compiled the largest dataset of clinical topics with matching RCTs and NRS using various analytical methods to date, covering >100 unique clinical questions. Incorporating information on direction of effect and effect size from >700 unique studies, the dataset can be used to evaluate discrepancies in treatment effects between study designs across a wide range of therapeutic areas.

Conclusions:

An empirically based understanding of the risk of bias in NRS is required in order to promote the adequate use of non-randomised evidence as input for health economic decision-making.

Governance of collection, use and storage of RWD in the view of data protection concerns

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Issue/problem:

Collection, storage and sharing RWD raise concerns regarding the privacy, data protection and governance of access. To date, the concerns related to consent and adequate safeguards for data protection in conventional research and health care settings are being discussed in details in the literature. However, collection of RWD from individuals fuels questions regarding the applicability of the regulations for human subjects' research and personal data protection.

Description of the problem:

The data collected in the framework of RWD need to be protected in line with the overarching principles of human subjects research and personal data protection regulations such as the EU General Data Protection Regulations (GDPR). In particular, the purposes of data collection, potential further uses, duration of storage of data and the authorized users' access to data should be managed in compliance with applicable data protection regulations. In addition, the adequate models for de-identifications of data should be used in compliance with the applicable data protection regulations. Ethical oversight on the process of data collection, storage and use should also be scrutinized.

Effects/changes:

In order to respect the privacy rights of the patients, it is essential to first identify the potential risks and assess the adequacy of the existing safeguards in protecting the privacy of the patients.

Lessons:

The effectiveness of the current access governance in the context of RWD should be assessed and the required safeguards to be proposed.

10.M. Workshop: Behaviour change and knowledge translation: The unlocked potential to improve people's health

Organised by: EUPHA (CHR), WHO EURO, IBTN
Chair persons: Iveta Nagyova - EUPHA (CHR), Simon Bacon - Canada
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Background:

Despite the complexities of modern healthcare it remains the case that human behaviour plays a critical role in health outcomes and in the efficacy of most treatments. We know that people get sick because of unhealthy behaviours. We know that the success of most healthcare interventions is highly dependent on patients' willingness to adhere to self-care activities such as taking medications or performing self-examinations. Over the last decades well-validated, cost-effective behavioural medicine interventions have been developed. The field has contributed to strategies in health education, with techniques for modifying behaviour, and enhancing motivation and learning for health. More recently, multilevel intervention models, including environmental and policy variables, are being increasingly proposed and tested. Yet, for several reasons, only few such interventions have been translated into policy recommendations or implemented successfully in clinical practice. Through highlighting critical gaps in knowledge translation that can be addressed by integrating modern theoretical and methodological approaches across disciplines we hope to contribute to the development of effective and implementable behaviour change interventions for optimal population and individual health and well-being.

Aim:

The aim of this workshop is to broaden our understanding of measures that have originated from behavioural sciences and have a lot to offer to public health. This workshop also seeks to contribute to capacity building in knowledge translation and evidence-informed decision-making in public health.

Workshop structure:

The workshop will consist of five presentations providing an overview of topical issues in the field of behaviour change and knowledge translation, followed by an interactive audience discussion. The first presentations will introduce the most recent challenges in knowledge translation from the WHO/Europe perspective. The second presentation will discuss the possibilities of using behaviour change principles in the development and adoption of health policies showcasing the Canada's newly adopted Food Guide. The third presentation will highlight the challenges in tackling physician's ability to effectively conduct behaviour change counselling with their patients in the context of chronic disease prevention. The fourth presentation will make the link between the knowledge translation theory and practice, using the Behaviour Change Wheel theory. The fifth presentation will introduce the free academic meta-search engine - Motrial, which has a great potential in evaluating the randomized controlled trials and fuelling meta-analyses and systematic reviews in return of better quality. Further to the reflexion on the current knowledge base, an audience discussion will give attendees the opportunity to share their opinions regarding challenges and opportunities in knowledge translation to improve people's health and well-being.

Key messages:

- Policy development and adoption can be considered as a behaviour change process.
- The application of behaviour change principles to the policy process may lead to greater stakeholder engagement and faster policy implementation.

EVIPNet Europe – bridging the research-to-policy gap

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Issue/problem :

Despite substantial investments into increasing the availability and accessibility of information in the WHO European Region, scientific evidence often plays a limited role in policy and practice resulting in lost opportunities to improving health systems and outcomes.

Description of the problem:

The WHO Action plan and resolution to strengthen the use of evidence, information and research for policy-making, adopted in 2016, urges Member States to increase country capacity to foster the utilization of research in both policy and practice. To support and guide Member States in this effort, the World Health Organization (WHO) Regional Office for Europe launched the Evidence-informed Policy Network (EVIPNet) Europe, a capacity-building initiative that operates in line with, and in support of, Health 2020 and the 2030 Agenda for Sustainable Development. EVIPNet Europe aims to assist its member countries and catalyse sustainable change by strengthening both the evidence supply and demand sides, and building knowledge translation (KT) capacity at individual, organizational and system levels.

Results:

EVIPNet Europe has been successful in enhancing the capacity of policy-makers and researchers to access, appraise, package and use evidence; strengthening organizational capacity and infrastructure; and creating institutional bridges between policy and research communities. The network's activities have, furthermore, led to an increased conceptual and instrumental use of evidence in policy, introducing important changes in policy strategy development and legislations.

Lessons:

To overcome the knowledge-to-policy gap, comprehensive capacity building strategies, operating at individual, organizational and systemic levels are required to create and sustain a culture more favourable to evidence-informed policy.

Using behaviour change principles in the development and adoption of health policies

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Issue/problem:

We now live in world of ever-increasing amounts of evidence and information. Unfortunately, high quality evidence is not always incorporated into policy documents and can be ignored by policy makers when making decisions.

Description of the problem:

Canada recently released its Healthy Eating Strategy, a comprehensive policy which covers a number of aspects, including Canada's new Food Guide. The Food Guide is rooted in both nutritional and behavioural evidence. It is unique in the fact that it has taken a behaviour-oriented perspective, rather than a macro and micronutrient path. In addition, to incorporating a behavioural perspective into the policy there is a concerted effort to leverage basic behaviour change principles to get the healthcare community to increase their uptake and usage of the food guide. Furthermore, the same principles are being leveraged to ensure that policy makers and members of the government continually reinvest and push the food guide forward as new evidence is generated.

Results:

Though the Healthy Eating Strategy is still relatively new, there has been substantial policy movement on a number of the areas it will tackle. For the Food Guide, this was only released at the start of 2019, so its uptake and impact is not currently measurable. However, there is a monitoring plan which will evaluate these aspects. That being said, there is some evidence that the Food Guide, and the messaging around it, has been well received.

Lessons:

Taking a behaviour change perspective in the development and delivery of policy, especially health policy, has the potential to positively engage more stakeholders in the process. Ultimately, more evidence is needed to define the optimal way to do this.

Applying behavioural science to improve physicians' ability to help people improve their own health behaviours

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Issue/problem:

Poor health behaviours are at the centre of most non-communicable chronic diseases and account for a significant amount of morbidity and mortality. Healthcare professionals, and especially physicians, are in a unique position to be able to positively influence their patients and aid them in changing poor health behaviours. However, most physicians report having low confidence or a lack of skills to effectively achieve this.

Description of the problem:

The main approach that physicians take to influence their patients' poor health behaviours is to provide them with advice and evidence about the impact of the poor health behaviours. This strategy has been shown to have limited impact on changing patient behaviour. As such, there is a need to develop effective interventions that target changing physician health behaviour counselling behaviours, effectively, a behaviour change intervention for physicians so that they are better at helping patients change their behaviour.

Results:

Using a structured stakeholder-oriented approach (the ORBIT model for developing behavioural interventions) we have systematically developed a robust behaviour change-based continuing medical education curriculum (leveraging motivational communication), and online assessment tool to improve physician competency. These were developed by a pan-Canadian team with notable international input through the IBTN.

Lessons:

The use of a structured stakeholder-driven process, we have developed an intervention which seems to have greater relevancy to the target audience, lead to greater engagement, and a higher probability of implementation than a researcher led approach. Whilst the studies are still ongoing, it is anticipated that this intervention will be able to dramatically improve the health of individuals through effective health behaviour change interventions by healthcare professionals.

Mobilizing knowledge in behaviour change to promote health; the case of the Behaviour Change Wheel

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Issue/problem:

Over the past decades, researchers from many fields have built an impressive body of knowledge regarding behaviour change. However, the use of this knowledge for accurately designing/delivering/executing behaviour change programs is challenging for many public health practitioners.

Description of the problem:

To support effective knowledge mobilization in behaviour change and to build a coherent and useful body of scientific evidence, leading researchers in behavioural sciences have developed and refined a number of tools for designing interventions. Among these tools, the Behaviour Change Wheel (BCW) was built on an impressive effort to synthetize available evidence regarding intervention development frameworks, behaviour change theories, and behaviour change techniques. However, studies highlighted some issues associated with the use of these methodological innovations. Working with our public health partners in the field of health communication, we realized that applying models such as the BCW is far from being mundane practices. To support optimal knowledge mobilization in behavioural sciences, we are developing a research agenda to understand perceptions and motivations of public health practitioners toward innovations such as the BCW and to develop and evaluate knowledge mobilization strategies.

Results:

The initiative will contribute to the development of new scientific knowledge regarding mechanisms underlying effective knowledge mobilization in behaviour change and will further support the adoption of these evidence-based practices within the field of public health.

Lessons:

Although rapidly adopted by the community of researchers, it is not clear whether or not public health practitioners would be as willing, or capable of using the BCW to design and deliver programs. Issues regarding knowledge mobilization in behaviour change should be addressed to improve the uptake of this knowledge in practice.

Motrial - An Academic and Collaborative Search Engine Dedicated to Behavioural and/or Public Health Intervention Publications

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Issue/problem:

Trials are the most reliable source of evidence on the efficacy, safety and cost-effectiveness of interventions aimed at preventing, caring or curing. Their number in the field of non-pharmacological interventions (NPIs), especially behavioural interventions, has increased exponentially since 2000. Their methodology is improving with the support of several organisations such as CONSORT, SPIRIT, TIDieR, PRISMA and IBTN. They can fuel meta-analyses and systematic reviews in return of better quality.

Description of the problem:

One of the difficulties in carrying out these meta-syntheses is the exhaustive and relevant search of trials. Publications are not always identified in biomedical databases (e.g., PubMed, Embase). New article publishing offers are available to authors such as Open Access journals (e.g., PLOS One, Scientific Reports, Helyion, JAMA Network Open). Data collection of trials is more difficult, longer and subject to biases.

Results:

The Plateforme CEPS, which has the general objective of encouraging clinical trials on NPIs, has created a search engine that makes it easier to find these trials. Motrial (www.motrial.fr) distinguishes the main publication from secondary publications and duplicates. It indicates whether the trial has been declared to an ethics committee, registered to the competent authorities and received funding. This academic search engine in English is free. The search can be configured with methodological and ontological criteria. If not already done, the user is invited to join the main publication of the trial with the declaration of its protocol to an official instance. Motrial displays the main characteristics of the trial and its main publication. Each request can be saved, modified, completed.

Lessons:

Data collection of non-pharmacological intervention trials is difficult, long, and subject to biases. The free and academic meta-search engine Motrial is a tool that helps to advance knowledge utilisation.

10.N. Workshop: Leveraging evidence for policy making: lessons from the European Joint Action on Health Information

Organised by: InfAct, Sciensano, Belgian Federal Public Health Institute
Chair persons: Claudia Habl - Austria, Herman Van Oyen - Belgium
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Leveraging evidence to inform best practices in health policy and health care is pivotal for better health outcomes. This has been widely recognized by international organizations such as the World Health Organization, and national health authorities. Health information (data on health and health systems) can be used to inform interventions at national, regional and local level. However, getting evidence into the hands of key stakeholders is still a challenge in many European countries. There are many obstacles, for instance interoperability between data systems is an issue, and the resources allocated for health reporting and monitoring are sometimes insufficient.

There is an uneven evolution of data collection practices across Europe which may imply differences in the capacity to use evidence for policy development. While public health agencies aim to improve health for all, building bridges for better knowledge translation requires tools to pave the way forward. As the nature and volume of data that are generated increases, countries increasingly need frameworks with which to appraise, and apply evidence. This relies on the innovative use of health information in public health and the health policy process, and increased solidarity in data sharing among actors in the health system.

This workshop aims to provide delegates with a clear understanding of the strategies that can support the use of evidence in the European context. Five case examples from the European Joint Action on Health information (InfAct) will be presented. The panelists will provide solutions that support the transfer of knowledge from scientific research, and public health surveillance into policies and innovative programmes.

The objectives are two-fold: 1) to provide delegates with an overview of the accessibility of health information for public health policy in EU-Member States; 2) to present solutions that focus on better data sharing, and new roles for stakeholders working in health and policy.

The workshop will begin with an introduction to the latest developments in health data collection, quality assessment, and on the availability of health information in Europe. Next, strategies to prioritize health information for policy development will be presented. Across countries, there is increasing interest on how to use ‘‘real world data’’ which requires an understanding of the interoperability frameworks available in Europe - this will be the focus of the third and fourth presentations. Finally, a new tool for evaluating the impact of health information developed with input from European experts in 38 countries will be introduced.

The session will have an outcomes-oriented approach. We will build on the opportunity for interactive exchange with the delegates. Dialogue on what can be done, and what is needed to leverage data for action will be transcribed. This will inform a commentary that can later be submitted to the European Journal of Public Health.

Key messages:

- There are wide differences across Europe in the development of information systems and data reuse. It is crucial to facilitate the use of evidence for policy development and decision-making.
- The EU-Joint Action InfAct is promoting evidence-informed policy-making by structuring health information exchanges in Europe, and providing tools for a sustainable impact in policy and practice.

Generating knowledge on data collection methods and the availability of health information in Europe

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Background:

Data collection methods, metadata-reporting standards and usage of data for health monitoring (HM) and health system performance assessment (HSPA) are not uniform in Europe. Moreover, the evidence produced by research are not always available, comparable or usable for research purposes and policy making. The aim is to summarize health data collection methods, quality assessment, availability and accessibility procedures covering different data sources for HM and HSPA across EU countries.

Methods:

The study is conducted through a multidimensional approach, which includes: i) a review of institutional websites (OECD, Eurostat, WHO-Europe); ii) a review of EU research networks; and iii) a multi-national survey addressing epidemiologists, health data managers and researchers that have played leading roles in EU projects. Currently, the survey instrument is being piloted. A qualitative data analysis to describe and compare the identified data sources for HM and HSPA will be performed.

Results:

As part of the work within the Joint Action 'Information for Action' (InfAct), the study will generate knowledge on standardized health data collections and related metadata, used methods and procedures for HM and HSPA in EU. It will also facilitate the identification of national or sub-national health data collected through standardized procedures but not included in international databases or research networks.

Conclusions:

The lack of infrastructures for health data sharing in EU limits data usage and comparability within and between countries. This study, as part of InfAct, will facilitate the assessment of health inequalities across EU countries in terms of quality, availability, accessibility and comparability of health data and information. It will also facilitate sharing and dissemination of standardized and comparable health data collections, which are essential for research and evidence-based policy-making.

The innovative use of health information in public health policy across EU-Member States

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Background:

Health information systems both at the national and international level play a key role in ensuring that timely and reliable evidence is used for operational and strategic decision making inside and outside the health sector. The availability of data generated from different sources is increasing with the possibility to link these data sources together. However, more efficient data generation processes are required to use data collected for different purposes initially, as well as advanced statistical techniques to generate comparable and timely health information. The main objective is to explore the innovative use of health information for better public health policy across the Member States.

Methods:

As part of InfAct, we have conducted as survey among EU-MS to describe the innovative use of data sources. We are collecting inspiring examples on the innovative use of health information based on national or European data networks involved with health policy-making at national, regional or local level. We are further developing generic methods to estimate health indicators using machine learning techniques and mathematical modelling.

Results:

These approaches will generate a roadmap on the innovative use of health information across Member States, enlarge the existing list of health indicators estimated from linked data and/or advanced statistical techniques, inform on the implications of these indicators in health policy with inspiring examples from Member States, and provide methodological guidelines for using linked data and advanced statistics to estimate health indicators, and composite outcome measures.

Conclusions:

This work will highlight the gaps in the innovative use of data sources, and improve the comparability of health indicators and the capacity of EU-Member states to apply innovation for increased relevance and timeliness of health information for public health policy-making.

Prioritizing Health Information in Europe – What do we want and need to know?

Katherine J. Ombrellaro

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Background:

Prioritization of Health information (HI) involves the establishment of methodological standards, and the development of political momentum to reliably track health status and health determinants. This is important in order to strengthen the evidence base for public health policies and facilitate effective delivery of healthcare services. In support of the establishment of a sustainable EU-wide Health information system, this consortium explores how HI is prioritized in EU and associated countries.

Methods:

The Robert Koch Institute is conducting an online Policy Delphi survey among InfAct project partners, stakeholders from EU-Member States and associated countries. The Delphi methodology allows for rankings and priority-setting among a group of experts. The Policy Delphi facilitates the analysis of the impact and acceptability of a proposed policy option. The survey targets experts in national public health institutes and agencies, ministries of health and research. Participants are invited to provide information regarding their national HI prioritization processes, and to rank prioritization strategies and criteria, according to their degree of "desirability", "feasibility", "importance" and "confidence".

Results:

The Delphi survey will compile and assess processes and methods used to prioritize health information at national level in the EU and associated countries. The expected outcome is a list of good-practices in health information development and prioritization within countries, which could be further integrated to a health information prioritization strategy at the European level.

Conclusions:

Prioritizing health information ensures that the right data is collected, is used to support ongoing public health policy action, and to capture emerging public health issues. This overview of prioritization strategies and methods aims to promote evidence-based public health by structuring exchanges about national HI prioritization in Europe.

Real world evidence for European health policy-making: making the case for interoperability

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Background:

The foundations of evidence-based health policy-making are transitioning from the use of partial evidence yielded elsewhere and the application of heuristic rules, to the development of learning systems based on the reuse of routine data collected by the same institutions that have to implement those policies. Supporting that transition, the scientific production of real-world evidence (RWE) is becoming pivotal, particularly in international policy-making. However, leveraging the immense wealth of data curated in European public institutions, requires the development of a new world-class research infrastructure and a supporting interoperability framework (IOF).

Methods:

Based on the European Interoperability Framework (EIF) legal, organizational, semantic, and technical issues are being assessed. While legal, organizational and technical topics are analyzed from the perspective of the type of infrastructure, centralized or federated, to be developed, semantic interoperability is explored using three case studies on the linkage of different real world data sources: for characterizing resilient populations, studying the burden of dementia, and the effectiveness of stroke care pathways.

Results:

Preliminary assessments advocate for the development of a federated infrastructure where data remain in house and research questions, data access and interoperability services are shared according to the capacity of each specific partner in the federation. Interoperability services for such an infrastructure should cover: a) the development and maintenance of a common data model to assure semantic interoperability, b) the development of self-contained distributed analytical pipelines; and c) the implementation of a training program aimed at increasing the capacity of each RI hub.

Conclusions:

An interoperable federated research infrastructure is required to leverage the potential of real world data for European health policy-making. InfAct is paving the way.

The Health-Information Impact Index: a tool to monitor the uptake of evidence in policy and practice

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Background:

The optimal use of data and evidence from national health information systems is paramount in public health. However, current tools to evaluate health information systems focus on data quality and availability rather than measuring how data are used by key stakeholders. This limits capacity to monitor the impact of evidence on health care management and health policy making.

Methods:

Based on an extensive literature review we developed a new model, the Health Information (HI)-Impact framework, to monitor the impact of health information in health policy and practice. We further conducted a web-based Delphi survey between February and April 2019 among European public health professionals working in health policy, health care, research, and health monitoring to develop the HI-Impact Index.

Results:

In the HI-Impact framework, four domains are essential for mapping public health data availability, dissemination, and use: (1) Health Information and Evidence Quality, (2) Health Information System Responsiveness, (3) Stakeholder Engagement, and (4) Knowledge Integration. This last domain has a broader reach on the determinants of health and reflects the use of evidence by community partners and across sectors. In the DELPHI survey, 127 experts from 38 European countries selected 30 criteria to integrate in the HI-Impact Index. This tool could be used by European public health agencies to monitor the impact of their information products, and inform national strategies for evidence-based public health.

Conclusions:

It is crucial for routine health information systems to create a culture of accountability in the use of evidence. Data on the determinants and consequences of ill-health as well as stakeholder engagement in leveraging evidence for intervention are explicit points to consider for a full quality assessment of national health information systems, and a sustainable impact on health outcomes.

10.O. Knowledge transfer strategies for more evidence-based practices: West Africa and France examples

Organised by: ISPED - Institut de Santé Publique d'Epidémiologie et de Développement
Chair persons: Linda Cambon - France, Valéry Ridde - France
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Evidence-based decision-making and practice are pivotal in public health. They offer a way to improve the efficiency, credibility, and sustainability of health systems. For researchers, this means looking ahead to the dissemination of findings and integrating different types of knowledge and decision-making challenges. It also implies greater collaboration between the research community and decision-makers. Furthermore, this can lead to a better social acceptance of the chosen decisions and interven-tions. However, despite the general agreement about the interest of evidence informed practices and policy-making, barriers do persist in both the production and use of evidence. These barriers relate to people, organisations, contexts and properties of evidences. To address this, it is necessary to rethink how knowledge is produced and used, to enhance our understanding of decision-making processes, logics and mechanisms and to examine the ability of public health services to integrate research findings into their decisions and operations. This requires a systemic approach, which includes the adaptation of scientific knowledge, the ability of users to capture, understand and apply the available evidence, as well as an accurate organisation and a supportive culture for using evidence. These are the major chal-lenges of knowledge transfer, defined by the National Public Health Institute of Quebec (INSPQ) as ‘‘the group of activities and interaction mechanisms that foster the dissemination, adoption and appropriation of the most up-to-date knowledge possible for use in professional practice and in healthcare manage-ment’’. In light with that context, the objective of this workshop is to share the most recent research re-lated to knowledge transfer that involve decision makers and field professionals, and to discuss with them of its impact on their practice. Use of knowledge transfer being extremely context dependent, the workshop will provide two examples of research under process in France and Francophone West Africa (that involve decision-makers and field professionals) that aim to improve evidence-based decision-making and practice in local prevention sector. KT research is still relatively rare in the French-speaking countries and this workshop aims in particular to provide a crossover perspective in a context of high- and low-income countries. These researches will be discussed from the point of view of decision-makers and field professionals. The workshop will also offer the opportunity to highlight several methodologies used in knowledge transfer research and several knowledge transfer strategies and tools as well as their relation to context.

Key messages:

- This workshop is the opportunity to share the most recent research related to KT that involve decision makers and field professionals, and to discuss with them of its impact on their practice.
- Knowledge transfer strategies are known to be context dependent.

Evaluation of a KT scheme to improve policy making and practices in health promotion, TC-REG project

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Background:

Evidence-based decision-making and practice are pivotal in public health but barriers do persist. There is a need to address these knowledge transfer (KT) issues. We aim to assess a KT scheme for the use of evidence in prevention, in regional health agencies and non-profit organizations for health education and promotion, in 4 French regions.

Methods:

We use a comparative multiple case study and a realist evaluation to examine what work, under what conditions, for whom. Realist evaluations are based on middle range theories (MRT) that describe the interactions between contexts-C, mechanisms-M and outcomes-O, i.e. CMO configurations.

With a literature review and a seminar with professionals we built an initial MRT. It led to 4 theories of intervention that are applied in regions since May 2017 (T0). We collected data with 36 interviews, 61 questionnaires at T0 and, 10 interviews, 18 observations, 4 focus groups during implementation.

We now run a second wave of interviews and questionnaires (Apr. 2019; T1) to validate the CMO configurations.

Results:

The initial MRT we built says that an effective KT scheme needs to combine an access to and an adaption of knowledge, the development of professionals’ skills, organizations and processes improvement. With T0 interviews, we identified 7 C (e.g. organizational, financial) and 13 M (e.g. ability to identify scientific evidence, motivation to use it because of its utility perceived, etc.). With T0 questionnaires, we identified use of scientific evidence O. We developed a KT taxonomy with implementation data. T1 analysis will provide the CMO configurations of an effective KT scheme in prevention sector, with a view of transferability into other contexts.

Conclusions:

KT guidelines for France will be developed at the end of 2019.

Main messages:

We provide a methodological example of a realist evaluation (and how to collect and refine CMO configurations) and the parameters of successful KT strategies in local prevention sector.

Impact of the TC-REG project on decision-makers and field professionals’ practices

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Background:

The TC-REG project aims to assess a KT scheme for the use of evidence in prevention, in regional health agencies and non-profit organizations for health education and promotion, in 4 French regions. The objective of the presentation is that decision-makers and field professionals from 3 regions involved in TC-REG (Martinique, PACA, Normandie) share their experience and the impact of this research on their practice.

Methods:

In Martinique, they developed a KT scheme using interactive and participative methods. In PACA, the KT scheme was based on various methods, including the participation of local actors, experts or health promotion actors, in order to analyse, select and popularize the relevant evidence for local actions. In Normandie, the KT strategy was composed of diffusion on evidence, exchange, training, interactive and participative methods with reflexive workshop. All the schemes aimed to improve the communication on evidence, develop professionals’ skills to use it and modify the organizations to facilitate its use.

Results:

Use of evidence is now stated and recommended in the calls for projects from the 3 regional health agencies. In Martinique, use of evidence helped professionals to improve their practice, to add value to their project, etc. In PACA, local actors created documents in order to transfer capital information selected from evidence-based data they analysed. In Normandie, evidence in prevention is now seen as decision help and integrated in regional programs and in the process contractualization with field professionals.

Conclusions:

In Martinique, the methodological support they benefit from the TC-REG project helped to understand, use and transfer evidence. In PACA, the professionals testified that methodological support and work conditions they benefited were essentials in the process to allow comprehension, integration and popularization of evidence. In Normandie, the existing dynamic of KT will be used to develop evidence-based programs.

A reflexive analysis of 10 years of knowledge transfer activities in French-speaking West Africa

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In French-speaking West Africa, the use of evidence for decision-making in the health sector is relatively rare and poorly studied. In addition, very few KT strategies are implemented in an explicit, organized and evidence-based manner. Thus, over the past 10 years, we have organized or been involved in multiple KT activities organizations. During these occasions, we were able to test the use of a variety of KT tools (policy brief, deliberative workshop, knowledge brokering, dissemination workshop, capitalization, video, etc.) in several countries such as Burkina Faso, Benin, Mali, Niger, Senegal. These activities were carried out with numerous operational partners (IGO, NGO, UN) and researchers from these countries.

The objective of this presentation is 1) to present examples of our practices to illustrate what can be done in Francophone West Africa, and 2) to propose a reflective analysis in order to produce lessons learned to improve our practices. The two authors met several times to carry out their analysis on the basis of their practical experience in these different countries. The results confirm the importance of studying, and taking into account in advance, all KT activities, the decision-making processes that vary significantly between countries and within countries. A thorough knowledge of the political and social contexts and of the tenuous and continuous relationships with decision-makers is a favourable factor for KT. It is essential to involve potential users of research knowledge throughout the research process but also in the creation and adaptation of KT tools. In Africa, the significant presence of international development aid, its actors and resources have a significant influence on the ability to mobilize actors and require that they be taken into account in the organization of KT strategies.

This communication will conclude with a proposal of some operational recommendations to improve our collective KT practices in French-speaking Africa.

Knowledge translation: how can NGOs contribute to bridging the gap between researchers and health practioners?

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Solthis is an international health NGO that has been working for 15 years hand-in-hand with local stakeholders, health practitioners, research institutions and donors in West and Central Africa. Our goal is to promote prevention and access to quality care through health systems' strengthening interventions in the field of infectious diseases and reproductive, maternal, newborn, adolescent and child health. In order to promote our interventions' efficacy, sustainability and scalability, we use three modalities of action: capacity building, operational research and advocacy.

As an NGO with recognized expertise, solid stakeholder foundations and particularly positive working relations with Ministries of Health, we are in a potentially key position to be involved in KT. As a matter of fact, we carry out KT activities as part of our daily activities: utilising knowledge to improve practices of health care workers, being involved in research priority setting, conducting operational research directly or in partnership with research institutions, advocating with policy makers to use research findings, having inputs into policy making.

To make the most of this unique position and to achieve better results, we have started to move from the usual dissemination activities often limited and concentrated at the end of projects, to more strategic and participatory KT activities, planned from the onset of the project and with dedicated resources.

This communication will go through the evolution of KT activities included in our projects and the analysis of barriers and facilitating factors for an effective knowledge translation (eg. adoption at scale of an innovation in public health programs and practices). In conclusion, we will formulate some recommendations in terms of: i) practical KT activities that NGOs can undertake; ii) how to build relevant partnerships between NGOs and researchers, and iii) advocacy for donors to recognize, and fund KT activities and their evaluation.

10.P. Workshop: Better ask those who are concerned: co-creation in participatory epidemiology and health promotion

Organised by: EUPHA (HP), EUPHA (PHMR), Robert Koch Intistute, Charité Berlin, University of MedicineChair persons: Nicole Rosenkötter - EUPHA (PHMR), Mario Bach - Germany
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Objectives:

The hallmark of participatory research is the establishment of equitable research partnerships with a diverse group of stakeholders such as public health professionals, health activists and community representatives. This includes co-creation as a guiding principle that informs several aspects of the research process. Originally, co-creation is a concept from management science and software design and is focused on achieving synergistic effects through user participation in design processes. Co-creation in participatory epidemiology and health promotion aims to improve the life of those who are subjects of research by giving them a stake how studies are carried out, respectively how health promoting services, programmes or products are designed and provided. However, implementing and realizing co-creation is challenging. Participation asks for a systematic reflection of underlying power relations in the research process through dialog, recursive methods of understanding, and joint planning.

This skills building seminar will present relevant co-creation concepts and methods. Additionally, illustrative examples from research practice are provided and will outline ways for implementing co-creation in the context of participatory epidemiology and health promotion. The seminar starts with a brief introduction on epistemological principles and ethical norms of participatory health research and state of the art definitions of co-creation. This presentation is followed by an introduction of how co-creation is impacting epidemiological research with regard to several aspects of the research process. Next, a project is presented in which co-creation informed the development of a virtual reality game in the field of alcohol prevention. Finally, participants will be split in two groups to have the opportunity to share thoughts on certain aspects of participatory research and co-creation in a poster discussion. More specifically, we aim to discuss:

- Does co-creation differ in the contexts of participatory epidemiology and health promotion? And if so how?
- What is needed to realize co-creation processes in practice?

The seminar targets everyone working in the field of population health monitoring and health promotion. The timetable is as follows: Introduction, principles and definitions (15 min), participatory epidemiology and co-creation (15 min), co-designing in prevention and health promotion (15 min), poster discussions (30 min), plenary discussion and roundup (15 min).

Main messages

- Co-creation is a way to improve the relevance of research findings, services and products for public health practice and the involved communities.
- Co-creation processes are vital to embrace the creativity of users and to ensure relevance and community ownership for health promotion programmes and services.

Key messages:

- Co-creation is a way to improve the relevance of research findings and products for various stakeholders.
- Co-creation is vital to embrace users' creativity and to ensure community ownership.

Co-Creation in participatory epidemiology

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Background:

Participatory epidemiology aims to involve public health professionals, health activists, and community representatives in epidemiological studies. Paramount are equitable research partnerships for identifying the causes of health problems, generating data, and finding ways to address health related issues. Alongside the research process, co-creation informs various aspects of participatory epidemiology.

Methods:

A scoping review was conducted to develop the conceptual foundations of participatory epidemiology. Workshops with staff from public health administration and public health practitioners were held to check feasibility of the concept for public health monitoring, policy making and the development of relevant public health recommendations. From this research, principles and practices of co-creation were identified.

Results:

Co-creation is of importance for participatory epidemiology. 1) Methodologically: Co-creation asks to apply multiple perspectives (research, practice, communities) in data collection and synthesis, what may require the adaption of a given study design. 2) Research practice: Co-creation in participatory epidemiology means producing epidemiologic evidence while contributing to concrete public health interventions, two goals that have to be balanced. 3) Personal attitudes: In participatory epidemiology academic researchers, practitioners, and community representatives are requested to acknowledge each other as co-researching partners, which can be challenging for each of them.

Conclusions:

Co-creation is a prerequisite for establishing equitable research partnerships. In participatory epidemiology, co-creation offers ways to produce meaningful knowledge for research and practice.

Main messages:

- Participatory epidemiology offers ways of producing epidemiologic evidence while contributing to public health practice.
- Co-creation is a prerequisite, way, and attitude to conduct meaningful research, hopefully for all of those who are involved.

Co-designing a virtual reality game for alcohol prevention

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Issue/problem:

Health promotion programmes that train social competencies in situations adolescents commonly encounter are likely to minimise the social influence and social pressure to drink or use other substances. In the Virtual Reality (VR) TestLab project, an innovative VR learning tool is developed that shows a typical party situation for young people. The game user can navigate through the party making their own choices, which result in different outcomes.

Description of the problem:

The Living Lab method guided the development of the VR learning tool. During the four phases of the Living Lab process three groups of 16-25-year-old students were involved, as well as two prevention practitioners, three prevention scientists, three VR game designers and one film production expert.

Results:

At the initial exploration stage of the Living Lab framework a list of key concepts/scenes were co-created with all stakeholders. At the concept stage students were invited to co-create a film script for the VR game. The prototype stage involved students as actors for the scenes, which were then finally recorded in technical collaboration with game developers and the film production expert. Post production, the finalised scenes were integrated into a game engine to develop the interactive branching narrative. At the innovation stage the group was invited to examine, explore and test its usability and share their experiences, thoughts, and attitudes.

Lessons:

The Living Lab framework was useful in order to structure the co-creation process into meaningful phases and to ensure that all stakeholders were consulted throughout the development of the VR game. The Living lab framework gave 'voice' for the end-users (young people and practitioners) to actively engage in the co-creation process.

Main message:

This first Living Lab application in drug prevention contributes to a better understanding of the importance of involving users of health promotion products and services through co-creation.

10.Q. Skills building seminar: Designing accessible environments for disabled people for training, expression of views & co-working

Organised by: EHESP French School of Public Health
Chair persons: William Sherlaw - France, Marie Cuenot - France
Contact: William.Sherlaw@ehesp.fr

Objectives:

We will actively explore ways of building bridges between people with disabilities and the non-disabled community. We aim to show an inclusive society will necessitate significant changes in ways of working with people with disability.

Organization:

The workshop is divided into 2 parts. In Part 1 through two 15 minute presentations we offer illustrations of participatory practice with people with disabilities and families taken from different, but allied sectors. Presentation 1: ParticipaTIC is an accessible transnational on-line training platform for disabled persons organization leaders. Specifically we will address how challenges of designing an accessible platform were met while highlighting outstanding tensions between on-line accessibility and other dimensions of digital design. Such issues are relevant not just to on-line instruction, but also to creating a truly inclusive society. Presentation 2: This describes how the European Academy of Childhood Disability has picked up the gauntlet of including families and organized a special 3 hour family session at their annual conference in Paris. Focus group style activities have been designed to a) enable the expression of families with respect to what matters for the happiness and well-being of their children with disability b) enhance the participation of families to improve knowledge, practice and understanding between families and health, social and educational professionals. Building on the Part 1 presentations, Part 2 of the workshop will involve a skills building activity (50 mins). This has been extensively used in disability and discrimination training at EHESP with master students, and civil servants. It uses role-play to raise awareness of the rights and needs of people with disabilities. Participants draw plans for redesigning hospital car parking to take into account the needs of all people that use the hospital. (This may be considered as a microcosm of society.) In a first phase (20 mins) groups of 6-10 participants brainstorm. Certain participants are then asked to step into the shoes of disabled people and work with others to produce plans. (20 mins) Feedback is offered on the process and the plan. (10 mins) In conclusion (10 mins), participants will briefly be asked to suggest improvements for the accessibility of a scientific conference such as EUPHA. Conclusion: Fully inclusive practice may be in tension with taken-for-granted habits. The extent of adaptations necessary may be surprising to non-disabled people. They go beyond using sign-language, induction loops, braille, and speech synthesis. They also include Easy to Read & Understand for people with intellectual disabilities. Beyond such adjustments challenges for including people with disabilities within training, meetings, and participatory fora are raised. We suggest that our 3 examples illustrate the challenge facing society and social services in co-designing truly inclusive practice and environments.

Key messages:

- Through placing people in the shoes of people with disabilities, participants will come to learn that inclusion also impacts on the very process of consultation and participation.
- Inclusion will involve creating accessible and participatory environments in order to offer equal opportunities for learning and participation adapted to different groups and capacities.

ParticipaTIC: Lessons from developing accessible on-line training for disabled people's leaders

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The ParticipaTIC Erasmus+ project led by the EHESP School of Public Health in partnership with disability organizations and associations from France, Belgium, Switzerland, and Romania has co-designed an accessible digital platform. In line with the 2010-2020 European strategy and the United Nations Convention on the rights of disabled persons we aim to strengthen the competences of the leaders of disabled persons' organizations to defend the rights of disabled people, and to develop participation. ParticipaTIC offers 4 modules on 'What is disability?', 'Competencies for disability organization leaders', 'the United Nations Convention' and 'How to carry out a local accessibility analysis'. Different contrasts, font size, speech synthesis, captioned videos and content summaries in 'Easy to read and understand' French are available together with a cloned platform in Romanian and English. Two guides have also been produced on 1) on-line accessibility and 2) co-constructing an on-line accessible platform. Beyond the deliverables, adapting on-line instruction to the different capacities of people with disabilities raises many issues. New competencies for accessible design are needed. Tradeoffs between content, pedagogical style and accessibility seem inevitable. On-line activities need adaptations but these may be complex and costly. Taken-for-granted assumptions about what is attractive, and well-designed are called into question when designing for people with visual, auditory, and intellectual impairments. Lessons from ParticipaTIC are remarkably similar to those of participatory thinking design: advance in small steps, evaluating successive design phases with people with disabilities for fitness of purpose. Ultimately trainers need to redesign themselves to take into account unsuspected worlds, those of our fellow citizens with different capacities. Important lessons beyond the world of on-line instruction for the building of a truly inclusive society have emerged.

Facilitating the collective expression of parents of disabled children at a scientific conference

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The European Academy of Childhood Disability is an academic association with over 500 members (health, social work and educational professionals working with children with disability) from some 35 different countries. The Academy wishes to put families at the heart of its agenda. Partnership with families has the potential to improve care and education outcomes and renew practice. It may also facilitate understanding between professionals and families. To this end for the annual conference in Paris a series of structured interactive group activities have been designed to facilitate the sharing of experience and expression of families and to gather their concerns. These activities designed by disability specialists in partnership with family representatives call on small group work "world café" style focus group methodology. They are structured, varied, interactive and take place in a specially organized conference session over 3 hours. Sensitive feedback is provided by experienced pediatricians in the childhood disability field. Parents provide narratives of significant experiences for their children prior to the conference. These are shared in groups of 3. Questions explored include "What matters for the happiness of your children? "Please give examples of things which have happened in your child's life which seem to be key experiences" Relating to the concept of F-words, (Rosenbaum, Gorter, 2011) parents have also been asked to consider different dimensions of their children's well-being such as friendship, functioning, fitness, family, fun, and future. Group discussions are noted, recorded, retranscribed and analysed allowing, the gain of insights and providing possible building blocks for professional training. Such qualitative data allows new topics and research on a joint family-professional agenda to emerge. These may be tackled at future conferences thus building bridges between specialists and families.

4. POSTER WALKS
1.R. Health promotion, health literacy

EnCLASS: an innovative project merging 2 international surveys (HBSC/ESPAD) among French students

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Problem:

For two decades, France has taken part in two ''competing'' school-based, cross-national surveys exploring the health behaviors and well-being of adolescent (Health Behavior in School-aged Children (HBSC) survey, 11-13-15 year-olds) and their substance use (European School Project on Alcohol and other Drugs (ESPAD), 15-16 year-olds).

Description of problem:

Since 2010, French data is provided at national level by grade rather than age. This allowed providing a continuous observation of health behaviors among adolescents, looking at the temporal spread of substance use and providing a better understanding of the role of school as a setting for adolescents' health. But the difficulty of participating every 4 years in two big surveys remained.

Effects of changes:

In 2018, France decided to conduct the 2 surveys in a unified and simultaneous way across middle- and high-school. This project is called 'National Survey in Middle- and High-school for Adolescents on Health and Substances', EnCLASS, explicit acronym easy to pronounce and remember in French. If the main objective of ''merging'' these surveys is to improve the monitoring of health behaviours and substance use throughout adolescence, it also allows a significant gain regarding preparation, coordination and organization of the fieldwork, hence of overall costs, while ensuring perfect comparability of data at international level.

Evolution of data visualization on substance use will be used to illustrate the challenges and improvements of such a process, based on data collected in 2018 among more than 20,000 representative secondary-school students.

Lessons:

In addition to a greater facility of interpreting and reading findings, presenting data throughout secondary school grades improves its impact and use in a public health perspective and allowing identifying operational targets for prevention and health promotion in schools, as classes are their main settings.

Key messages:

- EnCLASS is unique in Europe, it ensures an excellent comparability of data at international level while providing an innovative national monitoring of adolescent health behavior, including drug use.
- Further, by its improved quality, perspective and relevance, EnCLASS can contribute to Public health policies analysis regarding school-students in France in a less expensive and better way.

What if we combine Quit and win and individual approach to help smokers quit at the community level?

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Issue:

Tobacco eventually kills up to a half of its users. Helping smokers who wish to quit is one of the six cost effective interventions listed by World Bank to decrease smoking harm. Tobacco Control Scale in 2016, shows diversity in approaches and coverage to help smokers quit across Europe. Comprehensive interventions are most effective. Combining contest, financial incentives, individual approach and triggers (start of Lent or other) could be implemented in other settings.

Description of the problem:

Contest to motivate smokers for a quit attempt and individual help provided, has been conducted yearly since 2015 in a local community in Pozega-Slavonia County in Croatia. Data on all participants from 2015 through 2018 contests were collected by questionnaires and long term smoking status (6 months) evaluated by phone interviewing. Statistical analysis was conducted in SPSS. The objective was to determine how effective in helping smokers quit is a novel combination of evidence-based approaches ''Quit and win'' and individual support in local setting and to establish certain smokers characteristics as possible predictors of outcome.

Results:

Data for 153 participants were collected. There were more (54%) male participants. Participants mean age was 35.8 years (range 18-67). Short term (30 day) abstinence rate was 73.9% (113/153) and out of those 34.1% (31/91) abstained long term (6 months). Long term follow-up was 80.5% (91/113). Overall, long term quit rate was 23.7% (31/131). There were no statistically significant differences in short and long term quit rates depending on age, sex, education, employment or socio-economic status, pack-year measure or personal success estimates.

Lessons:

Comprehensive contest approach was found to be effective in helping smokers quit. Interest for implementation was shown by several counties and cities in Croatia. Effectiveness regardless of personal and social characteristics of contestants shows potential in different settings.

Key messages:

- Comprehensive interventions that include contest, financial incentives, individual approach and triggers in smoking cessation helped one in four involved smokers to quit.
- This approach has potential for implementation in diverse local communities as no difference in quit rates in different sex, age or socioeconomic groups were detected.

Effective elements of Dutch care-physical activity initiatives for low socioeconomic status adults

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Background:

In care-physical activity (care-PA) initiatives, primary care and sports collaborate to stimulate PA among adults at risk of lifestyle related diseases. Preliminary results of Dutch care-PA initiatives for low socioeconomic status (SES) adults indicate that these initiatives successfully lower participants' body weight and improve quality of life. However, insight into elements that make these initiatives work is lacking. Therefore, this research aims to unravel the effective elements of care-PA initiatives for low SES adults.

Methods:

Concept Mapping (CM) was used as tool to identify and cluster the effective elements. Nineteen Dutch health promotion experts individually listed as many elements as they felt were of importance to the effectiveness of care-PA initiatives. Next, each expert was asked to cluster the elements and to score them on importance. Then, CS Global MAX software was used for multidimensional scaling and a hierarchical cluster analysis to develop a cluster map. Finally, the cluster map was presented, discussed, and refined in a group meeting with 11 of the experts.

Results:

The experts came up with 113 unique effective elements of care-PA initiatives for low SES adults, clustered into 11 clusters: 1) approach of professionals, 2) barriers experienced during the programme, 3) local embedding, 4) customisation of the programme to target population, 5) social support, 6) methods within the programme, 7) competencies of professionals, 8) accessibility of the programme, 9) actions within the programme, 10) recruitment of participants, and 11) intersectoral collaboration.

Conclusions:

A valuable overview of the effective elements of care-PA initiatives for low SES adults was created. The results can be used to improve existing care-PA initiatives and to develop new ones targeted at low SES adults at risk of lifestyle related diseases. This may eventually help to reduce health inequalities between low and high SES adults.

Key messages:

- Concept mapping has been a useful group-based tool to obtain information on the effective elements of care-PA initiatives, in which individual input from health promotion experts has been collected.
- The overview of effective elements of care-PA initiatives for low SES adults as presented in this study is valuable for the development of care-PA initiatives specifically targeted at low SES adults.

Examining multi-layer constraints on activity engagement among older adults

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Background:

Social and cognitive activities motivate the older adults to develop individual aspirations, newfound sources of pleasure, and engagement in later life. The current study aimed to examine a wide range of factors that might impede older adults’ participation in activities, and to provide strategies to manipulate the constraints in the promotion of active ageing.

Methods:

We used data drawn from a sample of the Survey of Health, Ageing, and Retirement in Europe (SHARE) wave 7.0. The study sample comprised 48,742 European elderly, aged between 65 and 105 years (54% female). Multiple questionnaire items were used to assess various constraints including socio-demographic factors, personality, social supports, health and psychological indicators. Activities included social and cognitive activities and also moderate physical activities. A series of regression analysis was performed to examine the hypothesized relationships between study variables.

Results:

Those older adults who reported negative perception of neighborhood environment ($p < .001$), poor health ($p < .001$), chronic diseases ($p < .001$), and frequent loneliness and depression ($p < .001$) were less likely to participate in social and cognitive activities. Moderate-level of physical activities were strongly related to the health variables ($p < .001$) and social supports ($p < .001$). Among the demographic variables, age was highlighted as the most predictable factor for the decreased participation in activities.

Conclusions:

In order to promote diverse forms of activities in later life, we should be better-informed about different nature and variability of the constraints among the older adults. Improving accessibility to the activities such as ageing-friendly facilities and home-oriented social service and recreation programs can help older adults more engage in daily activities.

Key messages:

- Older adults experience varied constraints on social, cognitive and physical activities.
- Public health should improve accessibility to diverse forms of activities in later life.

Reliability and Validity of Disability Literacy Scale for Medical School Students

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Background:

Disability literacy is the ability to perceive definition of disabled person, their characteristics, difficulties in daily life and solution suggestions, their rights and false thoughts and orientations about them. The aim of the study was to develop the Disability Literacy Scale (DLS) to determine the disability literacy of medical school students with a high probability of encountering disabled people.

Methods:

This study was conducted in 1110 medical school students in 2018-2019 academic year. By using literature 97 questions were collected. DLS was created with 22 questions by taking expert opinions. Correct answer was scored as 1, while wrong or ’do not know’ answer as 0. In order to evaluate the reliability of the scale, item total score correlation and internal consistency (Cronbach’s alpha) analyzes and exploratory and confirmatory factor analysis were used for construct validity.

Results:

Of the 51.1% students were female and their age ranged from 17-40, the mean was 21.1 ± 2.2. After the scale development study, the scale consisted of 14 items and 3 sub-dimensions. Scale items explain 43.21% of total variance and factor loadings ranged from 0.37-0.80. The Cronbach’s alpha coefficient was 0.61, 0.64, 0.51 for communication, health problems and social life sub-dimensions, and 0.68 for the whole scale. The fit of scale and the fit index were found to be acceptable after confirmatory factor analysis. In the last form of the scale, the score that can be taken from scale range 0-14. It was accepted that by increasing of the score, disability literacy level was increased. The mean score of students was 9.79 ± 2.57 and the median was 10.0. The scores obtained from DLS were found to be lower in the first 3 grades ($p < 0.001$), low level mother and father education ($p < 0.001/p = 0.012$) and who have not yet taken lesson about disability ($p = 0.021$).

Conclusions:

DLS is a valid-reliable tool for assessing disability literacy levels of medical school students.

Key messages:

- It is essential to place disability related lessons from the earliest grades of medical school curriculum.
- In the literature, DLS seems the first scale about disability literacy and needs to be tested in large communities.

Validating a model & self-assessment tool to measure organizational health literacy in hospitals

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Background:

The European Health Literacy Survey (HLS-EU) demonstrated that in many European countries a considerable proportion of the population has limited health literacy (HL), that there is a social gradient for HL and that HL is associated with use of health services. Furthermore research mostly from the US also showed that HL of patients has detrimental effects not only on use but also on outcomes of health care. Therefore in the US the concept of the Health Literate Health Care Organization (HLHCO) has been developed by IOM to make health services more sensitive to the needs of patients with limited HL.

Methods:

Based on the IOM concept, a more comprehensive model of a Health Literate Health Care Organization fulfilling criteria of WHÓs health promoting setting approach has been developed. A set of standards and indicators according to quality management criteria (ISQUA) to measure the organizational HL of a hospital has been constructed, tested and validated in 9 different kinds of hospitals by a team in Vienna. This model and measurement tool has been translated to English and other languages and been used and validated also in other countries (Belgium, Italy, Taiwan). By an international working group of the international Health Promoting Hospitals and Health Services network an international version of the model and tool has been developed and will be tested in different countries.

Results:

The model and self-assessment tool has been demonstrated to be acceptable, feasibly, valid and useful to start self-assessment and improvement of organizational HL in different types of hospitals and health care systems.

Conclusions:

Organizational HL of health services matters for use and quality of health care of patients. Measuring organizational HL of hospitals by a validated instrument can support development of a more health literate health care organization and by that improve quality of care and tackle the health gap.

Key messages:

- Health literacy matter for health care and can be measured and improved on a personal and on an organizations or systems level to improve quality of care and tackle the health gap.
- A model and self-assessment instrument to measure organizational health literacy of hospitals has been developed and validated to support hospitals to improve their organizational health literacy.

Digital health literacy among adults living in the community in Singapore

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Background:

this study aimed to determine the level of digital literacy in adult Singaporeans in the community and its association with demographic characteristics, physical activity, self-rated health and bodily pain, and to identify the health needs of frequent internet users.

Methods:

a cross-sectional survey was carried out among individuals living in Punggol, Singapore on 2 June 2018. Survey data were using a 20-minute self-completion questionnaire. The questionnaire included the validated 8-item eHealth Literary Scale (eHEALS), the validated 4-item Exercise Stage of Change Questionnaire, a single item on self-reported health status and Likert scale items to assess level of bodily pain in the last 4 weeks and how much that pain interfered with normal work. The questionnaires and interviews were administered by registered nurses. Quota sampling was used to obtain sufficient numbers from different ethnic groups for analysis of the survey: the initial target was 120 Chinese, 60 Malay and 60 Indian individuals, one per household.

Results:

survey data were collected from 279 individuals (49.6% female), including 197 (71.1%) Chinese, 47 (17.0%) Malay, 18 (6.5%) Indian and 15 (5.4%) others. The mean age was 35.6 (SD 11.3). The eHEALS score had a mean of 29.4 (SD 6.2) out of a maximum of 40. Self-reported health status was positively associated with pain in the last 4 weeks (Kendall's $\tau = 0.141$, $p = 0.007$), how much that pain interfered with normal work (Kendall's $\tau = 0.160$, $p = 0.003$) and the Exercise Stages of Change score (Kendall's $\tau = -0.271$, $p < 0.001$). The correlation between the two pain variables was strong (Kendall's $\tau = 0.582$, $p < 0.001$). The only one of these measures significantly related to the eHEALS score was the Exercise Stages of Change score (Kendall's $\tau = 0.104$, $p = 0.030$). From linear regression models, the only independent variables consistently associated with the eHEALS score were age ($B = -0.090$, $p = 0.006$) and having a mobile phone plan ($B = 8.171$, $p < 0.001$).

Key messages:

- Digital health literacy was negatively related to age and positively related to having a mobile phone plan.
- The study finding suggest the need to identify individual Singaporeans with poor e-health literacy and provide them with remedial education.

Health Literacy of Hearing-Impaired High School Students, Some of the Problem, and their Expectations

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Purpose:

This study aims to determine hearing-impaired students' levels of health literacy, problems when they receive healthcare service and their expectations.

Methods:

This descriptive study was conducted on 88 hearing-impaired high school students over 15 years of age. The data collection tools used in the study are ‘‘Form of Problems Experienced When Receiving Healthcare Service’’, ‘‘Form of Expectations from Healthcare Service’’, and Turkey Health Literacy Scale (THLS-32). The researchers know sign language. The Health Sciences Faculty granted approval for the study (04.12.2017-255). The families were informed of the program through the school administration, and their consent was obtained.

Results:

70.5% of the students had inadequate, 19.3% had limited, 2.3% had adequate and 8% had excellent health literacy levels. Those who had communication problems with the doctor (25%), those who misused the prescribed medication (13.6%) and those who could not use the medication without help (43.2%) had low THLS scores (<0.05). Those who stated that they did not understand what the nurses said (43.2%) and the health education materials (56.8%) and those who reported that they were confused when they had more than one appointment (20.5%) had significantly low THLS scores (<0.05). 55.7% of them expected that their prescriptions or care procedures were to be given in writing, and 87.5% expected them to be told in sign language.

Conclusions:

Most of of the participants have significantly weaker general health literacy. Students with low THLS scores have less understanding of the given information and have problems with health workers.

Main messages: This can create disparities and inequalities in the use of healthcare services and in the health outcomes.

Key messages:

- This can create disparities and inequalities in the use of healthcare services.
- This can create disparities and in the health outcomes.

Beliefs About Medicines: Differences in cholesterol treatment adherence among the Visegrad countries

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Background:

Raised cholesterol is a risk factor for cerebrovascular and cardiovascular diseases. New cholesterol guidelines highlight more personalized risk assessments and new cholesterol-lowering drugs for people at the highest risk for cardiovascular disease.

Methods:

The aim of our study was to investigate the possible differences in the beliefs about the necessity and concerns regarding lipid-lowering drugs among the Visegrad Group countries. For this the Beliefs About Medicines Questionnaire (BMQ-Specific) was used. The statistical analyses included 235 Czech, 205 Hungarian, 200 Polish, and 200 Slovak respondents, all of who were taking cholesterol lowering drugs.

Results:

After comparing the answers of the citizens of the Visegrad Group countries, no statistically significant difference could be found regarding the concerns about the lipid-lowering drugs. However, related to the beliefs in necessity, a significant difference was shown between Poland and Hungary for the benefit of Polish participants. These results suggest, that the citizens of Visegrad Group countries do not differ regarding their beliefs about the fear of the treatment, while the beliefs about benefits are the most emphasized among the Polish citizens and less among the Hungarian citizens.

Conclusions:

While policy makers in the Visegrad Group countries can use the same strategy to address the concerns regarding cholesterol lowering medication, the reasons behind the difference in the beliefs in necessity should be further investigated in order to implement country specific interventions.

The research was funded by the GINOP-2.3.2-15-2016-00005 project which is co-financed by
the European Union under the European Regional Development Fund.

Key messages:

- No differences exist regarding the concerns for cholesterol lowering medication among the Visegrad Group countries.
- Concerning necessity significant differences were observed among the same countries, which prompts further research questions.

1.S. Migrants and access to care

Trust in health care systems Arab minority, Jewish immigrant and non-immigrant

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Background:

The objective of this study was to examine the level of trust towards Israel's health care services (HCS) among Palestinian-Arab minority, Jewish immigrant, and non-immigrant Jewish citizens. Previous studies have shown that minorities and immigrants have less trust in health care system (HCSys), which might represent a barrier in access to, and utilization of HCS.

Methods:

We obtained cross-sectional nationwide census data from the 2017 Social Survey of the Israel Central Bureau of Statistics. We studied levels of trust in the HCSys based on a survey question: 'Do you have trust in the healthcare system?'' We conducted logistic regression analysis within and between the study groups to compare levels of trust, after adjustment for different relevant covariates in different models.

Results:

Compared to non-immigrant Jews, Arabs had higher trust in the HCS (odds ratio (OR) = 3.08, 95% confidence intervals (CI) = 3.06,3.10) and compared to non-immigrant Jews, immigrant Jews had more trust (OR = 1.96, 95% CI = 1.94,1.98), even after adjusting for gender, age, education level, religiosity level, perceived discrimination, self-rated health status, HCS use, and having private health insurance. The variables that predicted trust in the HCSys were different in each ethnic group.

Conclusions:

Contrary to our hypothesis and to previous research, Arab and immigrant Jewish respondents in our study had greater trust in the HCS compared to non-immigrant Jews. This might relate to different expectations among our study groupsof the patient-caregiver relations which might affect the access to and utilization of HCS and finally might affect the quality of care.

Key messages:

- Exceptionally, in Israel, the Arab minority and Jewish immigrants have more trust in the health care system compared with non-immigrant Jews.
- More research is needed to understand how trust among minority groups relates to the patterns of utilization of HCS and raises question regarding the quality of care.

Understanding racism in Swedish healthcare

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Background:

Despite the removal of the term 'race' from statutory documents in Sweden, after the Second World War, racism continues to exist in various institutions including healthcare. Racism can persist in the absence of a biological notion of 'race' but becomes harder to explain when there is no official recognition. There is evidence of discrimination by patients and healthcare professionals, although fragmented and under-researched. As healthcare should be built on equity and solidarity, accounts of racism constitute a serious breach. Our research focuses on conceptualising racism in healthcare in Sweden to develop means of improving equity in care for populations characterised by migration-driven diversity.

Methods:

Data from 28 qualitative interviews with both patients and healthcare professionals in Sweden was collected.

Results:

Preliminary results indicate that patients from minority ethnic groups report that healthcare providers deem their symptoms as insignificant, due to their ethnicity. Consequently, they experience a loss of integrity and trust in healthcare, often leading them to avoid seeking healthcare. Healthcare professionals conceptualise racism in varied ways, ranging from denying racism, normalising and individualising racism to viewing racism as a structural problem. Patients did not report their experiences of racism, as racism was often subtle. Likewise, healthcare professionals mostly chose not to report their experiences for fear of being constructed as difficult colleagues.

Conclusions:

The lack of space for discussing racism within healthcare constitutes a problem for healthcare professionals and patients and contributes to rendering experiences of racism invisible. This may be detrimental for achieving responsive healthcare and creates an unhealthy working environment for some healthcare professionals.

Key messages:

- Promoting a constructive dialogue on racism in healthcare.
- Aiding in developing anti-racist practices in healthcare.

Information and communication technology-based interventions to support healthcare in migrants

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Background:

Advances in the field of Information and Communication Technology (ICT) are revolutionizing healthcare, while massive migration flows and cross-border populations' transit impose the planning, implementation, and evaluation of new integrated healthcare services and programmes. Nevertheless, no conclusive evidence exists on the vast potential offered by ICT to promote healthcare in migrant populations.

Methods:

We carried out a systematic review following the Preferred Reporting Items for Systematic Reviews and Meta-Analysis guidelines to retrieve, pool and critically appraise all the available evidence on the effectiveness of ICT-based interventions to support the healthcare provision to migrant and in-transit populations in Europe. We searched the electronic databases Medline and Embase, relevant grey literature and consulted with experts in the field. We restricted the area of interest to EU/EEA countries and included studies providing original quantitative data.

Results:

Out of 127 retrieved records, 53 (42%) met the inclusion criteria. Included studies were classified in the following four interventions: implementation of healthcare services (47%), patients' education (26%), healthcare services' monitoring (17%), and interventions on providers (10%). The most relevant data refer to telemedicine, prevention interventions, and healthcare data sharing and the most represented specific health-topic is that of mental health (26%). We present available data qualitatively and quantitatively pooled by country, type of ICT, target population and health topic.

Conclusions:

Selected ICT-based interventions have been implemented in Europe to promote healthcare in migrant populations; however, in most cases, no monitoring and evaluation exist on their impact, effectiveness, and cost-effectiveness. Strengthened efforts are needed to identify, plan, implement and evaluate effective interventions and share best practices to protect in-transit populations' health.

Key messages:

- Information and Communication Technology (ICT) offer great potential to promote health-care in migrant populations.
- Effective ICT interventions and best practices should be shared across Europe.

Racial discrimination and biological dysregulation among Indigenous adults: The role of culture

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Background:

Racial discrimination is an ongoing social concern that requires public health solidarity to address. Indigenous peoples in many countries report high levels of discrimination across a variety of life domains, particularly when they migrate into urban centres for school or work. Discrimination has wide-ranging impacts that go beyond mental distress to include alterations in stress biomarkers across multiple systems. This study examined the impacts of discrimination on multisystem biological dysregulation among urban Indigenous adults in Canada, operationalized through allostatic load; and the role that Indigenous cultural continuity might play in resilience.

Methods:

This cross-sectional study collected data from 150 Indigenous adults attending university in a small city in western Canada between 2015 and 2017 (M age: 28 years). Allostatic load (AL) was measured as a composite of 7 biomarkers assessing neuroendocrine, cardiovascular, metabolic, and immune system function. Bias-corrected and accelerated bootstrapped linear regression models examined associations adjusted for confounders.

Results:

Past-year discrimination was significantly and linearly associated with increased AL adjusting for age and income ($B = 0.17$, $p = 0.02$). Among adults with low cultural continuity, past-year discrimination was associated with AL in models adjusted for age and child discrimination ($B = 0.17$, $p = 0.01$), with past-year discrimination and the full model explaining 24% and 41% of the variance in AL; respectively. Among adults with high cultural continuity, past-year discrimination was not associated with AL, and the full model explained 1% of the variance in AL.

Conclusions:

Past-year racial discrimination was an adverse event capable of influencing multisystem biological dysregulation among Indigenous adults, independent of age and income. Indigenous cultural continuity may promote biological resilience against racism within this population.

Key messages:

- Racial discrimination was associated with multisystem biological dysregulation among urban Indigenous adults, controlling for age and income.
- Indigenous cultural continuity buffered the impact of discrimination on biological health.

Evaluation of the use of standardized methods to identify mental health problems among refugees

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Background:

The number of refugees arriving and residing in Sweden remains high. They represent one of the most vulnerable subpopulations in the country, who carry a disproportional part of the disease burden. Information on health status, health determinants and the extent to which refugees get access to needed services is limited. In Sweden refugees are offered a free-of -charge health examination (HE). Yet, standardized mental health screening is often neglected as a part of the HE.

A pilot project aimed to initiate early mental health screening was implemented.

Methods:

The Refugee Health Screener-13 (RHS-13) was identified as an efficient, valid, and reliable tool for assessing mental health in this population and was integrated into the HE. The RHS-13 was administrated by nurses conducting the HE at two primary health care centers in Stockholm.

Results:

During the one-month pilot 80 individuals were screened. The majority originated from Syria, DR Congo and Afghanistan and the distribution by migration background were 58% quota refugees, 35% asylum seekers and 8% others (family reunification and undocumented migrants). Of those screened, 30% screened positive for risk of mental health (cut off $\geq$11). Out of those who screened positive, 29% screened for mild mental health, 33% for moderate mental health and 38% for severe mental health problems. No statistically significant differences in RHS score were found according to country of origin, sex and age. The results are preliminary. Implementation will continue for 12 months at 4 primary health care centers.

Conclusions:

This pilot demonstrated feasibility of RHS-13 in routine care. The findings reinforce the need for standardized guidelines and procedures for mental health screening of refugees. Routine mental health screening should be a part of the overall comprehensive HE, which could improve systematic monitoring of mental health care needs for refugees and ensure access to appropriate mental health care.

Key messages:

- Standardized procedures for identifying mental health problems among refugees is feasible and can identify health needs while ensuring equitable health examinations.
- Standardized procedures for identifying mental health problems among refugees is feasible and can identify health needs while ensuring equitable health examinations.

Migrants and access to healthcare: the Italian public health residents action plan

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Background:

Fighting health inequalities have been included in the WHO Sustainable Development Goals as a priority. Migrants are between the most vulnerable individuals and healthcare interventions, also during the post-migration period, should be oriented, context-specific and aimed at identifying reasons underlying inequalities, as suggested by the recent WHO report 'No public health without migrant health'. The "Inequality Working Group" of the Italian network of public health (PH) residents of the Italian Society of Hygiene, Preventive Medicine and Public Health (SItI) aims at identifying an interdisciplinary approach suitable to detect barriers to healthcare access for migrants in different Italian regions. Secondly, we aspire to develop some strategies to overcome unequal healthcare access.

Methods:

Focus group methodology was applied to set working group educational needs, priorities of action and working plan. Moreover, we implemented a network between various professionals involved in migrant healthcare, particularly with the Regional Groups of the Italian Society of Migration Medicine (SIMM).

Results:

After a period of peer-to-peer education about social determinants of health and migration, we reviewed Italian policies about migrants' healthcare and considered potential discrepancies from WHO recommendations. Furthermore, we mapped practices regarding access to care for migrant population and we focused on causes underlying unequal healthcare access.

Conclusions:

Although with regional differences, migrants have limited access to healthcare services and therefore represent a vulnerable subpopulation.

Key messages:

- Fighting against the barriers that limit access to care for migrants is a priority for health systems.
- PH residents have a relevant role in identifying and defining critical issues, designing enforcement measures and implementing advocacy actions.

A first assessment of the electronic health insurance card for asylum seekers in Berlin

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Background:

Healthcare provision for asylum seekers differs across Germany. Most states use treatment vouchers as proof of eligibility; i.e., asylum seekers must first obtain a voucher from the welfare office to access healthcare. Since 2016 several states have introduced an electronic health insurance card (EHIC) for asylum seekers that enables access to care akin to statutory insurance. The EHIC has reanimated an old debate about asylum seekers' health benefits. Opponents claim that medical costs will rise if control over healthcare access is eased. Proponents argue that the EHIC reduces costs through the cutback of administrative workloads and improves access to care. Evidence for either position is scarce.

Goal:

The study goal was to assess the 2016 EHIC introduction in Berlin to enable evidence-informed decision-making.

Methods:

We analyzed claims data that were retrieved from the Berlin Senate Administration and ten semi-structured in-depth interviews with key informants. Interviews were recorded, transcribed and subjected to thematic analysis using ATLAS.ti software. Ethical clearance was obtained.

Results:

Our study found an overall positive evaluation of the EHIC. Although the introduction implied extra efforts and total administrative workloads remained unaltered, the EHIC was said to have the following advantages as compared to treatment vouchers: 1) It simplifies certain work processes and 2) allows for unprecedented financial transparency and control. 3) It eases access to care with 4) no increase in medical costs. Finally 5) the EHIC signifies equality and integration for asylum seekers.

Conclusions:

In light of our study results the common economic arguments against greater inclusion of asylum seekers into public healthcare systems appear unfounded. On the contrary, the example of the EHIC shows that inclusion can create win-win-situations by improving healthcare access, whilst keeping medical costs constant and advancing financial transparency.

Key messages:

- In Germany there is a long-standing debate whether easing access to care for asylum seekers will increase health costs.
- Our case study shows that, on the contrary, the introduction of an electronic health insurance card for asylum seekers can both improve access and have organizational and economic benefits.

Health assessment of newly arrived refugees to the Municipality of Copenhagen, Denmark

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Background:

Research data on the health status of newly arrived refugees is sparse. Newly arrived refugees and family reunified in The Municipality of Copenhagen has since 2016 been offered a general health assessment. These assessments are conducted by clinicians with expertise in refugee and migrant health from the Section of Immigrant Health. This study describes the sociodemographic characteristics and the burden of disease in this population.

Methods:

In this cross-sectional study the population consists of adult patients examined January 2017 to February 2019. Clinicians performed the health assessment including a questionnaire regarding sociodemographics, medical history, symptoms, traumatic events during/before migration, a clinical examination and blood samples.

Results:

The population had an equal presentation of males (N = 81) and females (N = 79) primarily from Syria (33%) and Iran (29%). The median age was 31,5 years (SD = 10,9). 67% had ≥8 years of schooling, while 11% had a maximum of 2 years. More than half had experienced war and 50% persecution. 76% suffered from Vitamin D deficiency, 31% of B12 deficiency and 12% of anemia. Few suffered from infectious and somatic diseases, yet many experiences symptoms such as pain (53%) and headaches (54%). 33% presented with symptoms of PTSD.

Conclusions:

A high frequency of micronutrition deficiency was prevalent in the refugee group. Furthermore, many suffered from physical symptoms while very few had serious somatic issues. Numerous traumatic experiences were reported and 33% presented with symptoms of PTSD. The data is presumably a reflection of the healthy migrant bias.

Key messages:

- Despite refugees presumably being tested pre-entry and at holding level, they still suffer several health issues when granted asylum.
- Many newly arrived refugees suffer from micronutrition deficiency. These conditions are easily treated and could enhance the overall health of the individual.

Subjective status comparisons and depressive symptoms among migrants and refugees to Germany

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Background:

Prior research has identified perceptions of relative social status to affect mental health. We investigated whether migrants to Germany who perceive that they would have a higher relative social status if they were still in their country of origin experience more depressive symptoms than those who perceive no such status discrepancy.

Methods:

Cross-sectional data were derived from a random sample of residents in the Berlin-Brandenburg region with a Croatian, Polish, Romanian, Syrian and/or Turkish citizenship (n = 728). Participants' perception of their relative social status in Germany was measured using the MacArthur Scale of subjective social status (SSS). An adapted version of this scale was used to assess respondents' hypothetical SSS in their country of origin if they had not migrated. Depressive symptoms were measured with the eight-item depression scale of the Patient Health Questionnaire. Diagonal reference models were used to examine whether discrepancies between the two status ratings were associated with depressive symptom severity.

Results:

Most respondents reported a higher (35.6%) or similar (49.0%) hypothetical SSS in their country of origin compared to their SSS in Germany. Respondents whose SSS in Germany was lower than their hypothetical SSS in their country of origin experienced the most severe depressive symptoms. In the diagonal reference models, this association remained statistically significant ($p < 0.05$), even after adjusting for objective socioeconomic position and other covariates. The pattern was similar for both refugees and non-refugees.

Conclusions:

Our findings indicate that perceptions of having a lower social status in Germany than hypothetically in one's country of origin are concomitant with poorer mental health among migrants. Prospective data are needed to address questions of causation and the direction of effects.

Key messages:

- Migrants who perceived that they would have a higher social status if they had not left their country of origin reported higher depressive symptoms than those with no such status discrepancy.
- This association persisted after adjusting for objective socioeconomic position in Germany.

Your Health, Your Faith: HIV prevention with African faith-based communities in Germany

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Migrants are disproportionally affected by HIV/AIDS in Germany, with about every third new HIV diagnosis given to a person who has migrated to Germany. More than half of HIV new diagnoses among migrants are people from sub-Saharan African countries. Because infections are not just brought from the countries of origin but also occur in Germany, HIV prevention services must be better tailored to the needs of migrants.

Your Health, Your Faith (2016-2018) is a community-based participatory health project that aims to improve the involvement of African faith-based communities in HIV prevention services. The project is conducted by the National AIDS Service Organization in collaboration with partners from different African communities, African pastors, AIDS service organizations (ASOs) and researchers from the Ludwig Maximilian University of Munich.

Teams of African activists, African pastors and ASOs have been built in eight German cities. All partners were invited to a series of concept workshops in Berlin in order to define together prevention contents, methods and forms of cooperation. Together, they developed a concept for preaching preventive messages in church settings and scenarios for a mobile educational theatre group.

To date 65 multilingual events have been held at various African churches, reaching approximately 5000 people. The results of the project has been evaluated on a multi-case basis, with quality standards being compiled for prevention events in African churches. In the course of the project, the participants designed a video that illustrates the prevention work in African Church communities. At the request of the pastors involved, a mobile training series on HIV/Aids for African pastors has been developed with the support of medical doctors.

Key messages:

- HIV prevention in African churches and cooperation between African churches, public health authorities and ASOs is possible and promising.
- Communication via pastors has proven useful, as have supporting theatre performances that facilitate communication about taboo subjects such as HIV/AIDS.

Predictors of Late Presentation for HIV among HIV-positive Tajik Migrants to the Russian Federation

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Between 800 thousand and 1.2 million citizens of Tajikistan currently live in the Russian Federation, one of the only countries where the HIV epidemic continues to worsen. Given the previously reported barriers to healthcare access for migrants in to the Russian Federation, and the rapidly expanding HIV epidemic in Eastern Europe and Central Asia, this present study set out to determine whether these barriers impact late presentation with HIV upon their return to Tajikistan. This study uses data from the Tajikistan Ministry of Health surveillance system. The dataset contains all new known HIV diagnoses between 2006 and 2018. At time of diagnosis, patients are interviewed by staff of AIDS centers, complete routine intake forms and complete medical exam and related forms by doctors. HIV-positive returned migrants who had lived in the Russian Federation ($n = 770$) were included in final data-analysis after data cleaning. Data were analyzed using three logistic (logit) models. The unadjusted logistic model found that for every year spent in the Russian Federation, the risk of late presentation for an HIV-positive Tajikistani migrant increases by 10.3% (95% CI: 5.5-15.3). The saturated multivariate model showed that when holding all study variables constant, the risk of late presentation for an HIV-positive Tajikistani migrant increases by 9.5% (95% CI: 2.6-16.9). The parsimonious multivariate model showed that when current age and region of origin are held constant, the risk of late presentation for an HIV-positive Tajikistani migrant increases by 6.3 (95% CI: 1.1-11.8). Even when other potential predictors are included in the logistic model, only age and length of time abroad remain statistically significant. The results of this paper suggest that if the Russian Federation were to adopt a reciprocal policy, it might improve treatment outcomes of migrant laborers. Further research is needed to explicate the causal pathways of the associations found in the present analysis.

Key messages:

- Structural factors are the strongest predictors of HIV late presentation among returned Tajik migrants to the Russian Federation.
- Further research is needed to explicate the causal pathways of the associations found in the present analysis.

Does the ehealth card facilitate access to healthcare from the point of view of refugees in Germany?

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Background:

The municipalities in the federal state of North Rhine-Westphalia (NRW) decide autonomously how to organize access to health care for refugees: either with electronic health card (eHC model) or with health care voucher (HcV model). The eHC model is often expected to facilitate access to health care and to reduce bureaucratic barriers. However, there are only few analyses of how refugees perceive the two models and their corresponding access to health care.

Methods:

A total of 28 problem-centered interviews with refugees were conducted in three municipalities in NRW (two with HcV and one with eHC model). Sampling was purposive, aiming to achieve a maximum variation of interview partners with regard to age, gender, chronic illnesses, pregnancy and parenthood. The interviews were conducted with the support of translators in the language of the respondents' choice. Interviews transcripts were evaluated by content analysis using the software atlas.ti.

Results:

Refugees using both the eHC and HcV models report mostly positive experiences when seeking care - both in terms of treatment and interaction with physicians or non-medical staff. The first contact with the health care system was rarely organized by refugees themselves in both models, but mostly with the support of social workers, friends, or family members. The main perceived difference between the models was that in the HcV model, urgent treatment required additional waiting time.

Conclusions:

Access to care is assessed similarly well by refugees in all municipalities. The additional approval process for treatment by the social welfare office in HcV municipalities may lead to a delayed treatment. Formal and informal support is particularly important for newly arriving refugees to help them navigate the complex German health system.

Key messages:

- The implementation of one access model alone does not facilitate access to health care for refugees.
- Formal and informal support is necessary for refugees to gain access to the health system.

2.R. Overweight, underweight and diet

Variation in uptake of Healthy Start Food Vouchers in the Six Health and Social Care Partnerships

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Background:

The primary aim of this study was to assess the difference in uptake levels of Healthy Start Food Vouchers, a means tested benefit to afford nutritious food, between 6 Health and Community Partnerships (HSCP) in Greater Glasgow and Clyde (GGC). Our secondary aim was to explore possible reasons for the observed variation.

Methods:

Routinely collected Healthy Start data for the months of August to September 2017 were obtained from the UK Department of Health. Postcode sectors were matched up with their corresponding HSCPs in GGC. Analysis looked for associations between uptake rates and various HSCP area-based characteristics.

Results:

Large variations were observed within GGC. Chi-square test showed a significant association between uptake and HSCP area ($P < 0.0005$). Trend analysis of uptake with area deprivation ($P = 0.001$) and resource allocation ($P < 0.001$) was also significant. Subjective analysis of trend direction suggested that uptake increased with deprivation and resource allocation of the HSCP.

Conclusions:

Significant trends were found and the observed patterns suggested that the relationship between uptake rates and HSCP area is more complex than the geographical characteristics alone. Future studies need to look at the difference in management and awareness of the voucher scheme between Maternity teams in HSCPs.

Key messages:

- There is significant variation in the uptake of means tested benefits with some areas having a nearly forty percent of eligible individuals not receiving available support.
- A qualitative approach is required to determine the causes of low uptake rates of benefits and improve the effectiveness of maternity teams in different areas.

Prenatal exposure to extra vitamin D from fortification and risk of developing coeliac disease

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Introduction:

Few studies have examined the role of maternal diet in relation to development of autoimmune diseases such as coeliac disease (CD). In Denmark, cancellation of mandatory vitamin D fortification of margarine in June 1985 provides this opportunity. This study examined if prenatal exposure to extra vitamin D from food fortification or season of birth were associated with a decreased risk of developing CD later in life. If low prenatal vitamin D levels are a risk factor, there are immediate, cheap and easy public health implications.

Methods:

This register based study has a partially ecologic design. The two entire cohorts were created using information available from the Danish birth registry and development of CD (ICD-8 269 ICD-10 K90) over 30 years was retrieved from the Danish National Patient Register. Logistic regression analysis was used to generate odds ratios and 95% confidence intervals.

Results:

There was a lower odds ratio of developing CD (OR: 0.811 95% CI 0.655; 1.003) from the exposed birth cohort adjusting for sex and season of birth. There was a significant season effect particularly for children born in autumn (OR 1.6 95% CI 1.16; 2.21) and born summer (OR 1.5 95% CI 1.1;2.1) when compared to children born in winter.

Conclusions:

The results indicate a potential protective effect of a small extra intake of vitamin D from food fortification by pregnant women in relation to the risk of their offspring developing CD. This conclusion is further supported by the results showing that summer born children, where first half of gestation occurred during the dark winter season, had a higher risk of CD. This research lends support for the reconsideration of vitamin-D food fortification in Denmark.

Key messages:

- Exposure to even a small amount of vitamin D prenatally may protect against developing coeliac disease later in life.
- Association between season and CD indicates that vitamin D may play an important role in relation to fetal programming.

Interventions for gestational diabetes prevention: An umbrella review of meta-analyses of RCTs

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Background:

Gestational diabetes mellitus (GDM) is a common pregnancy complication, defined as glucose intolerance with onset or first recognition during pregnancy, in women without diabetes history during pregnancy. It is a major cause for adverse maternal and fetal outcomes and affects around 15% of all pregnancies. GDM is considered to be a risk factor for future metabolic conditions and cardiovascular disease.

Methods:

An umbrella review was performed to identify systematic reviews and meta-analyses of randomized controlled trials for GDM prevention in order to summarize evidence and evaluate the validity of the interventions. We searched PubMed, the Cochrane library and ISI Web of Science from inception to March 2019. For each meta-analysis we estimated the summary effect size by random-effects and fixed-effects models, the 95% confidence interval, the 95% prediction interval, the between-study heterogeneity expressed by I2, evidence of small-study effects and evidence of excess significance bias.

Results:

Six-teen eligible papers were identified providing data on 39 associations. Eighteen (46%) associations had nominally statistically significant findings at $P < 0.05$, while only one (3%) remain significant at P < 10-6 under the random-effects model. Eight (21%) associations had large or very large heterogeneity. Evidence for small-study effects and excess significance bias was found in 5 (13%) and 2 (5%) associations, respectively. Only one intervention presented robust evidence for a convincing association: prenatal exercise compared with no exercise (RR 0.62, 95% CI: 0.52-0.75). It was supported by > 500 cases, 95% prediction intervals excluding the null, no large heterogeneity, small-study effects, or excess of significance.

Conclusions:

Prenatal exercise shows the strongest consistent evidence. The findings from our study highlight the importance of patient education about lifestyle modifications to reduce risk of GDM.

Key messages:

- Prenatal exercise could lower the risk of GDM based on solid epidemiologic evidence.
- Obesity, pregnancy hypertension and other metabolic conditions could be prevented as well.

Relationship between perception of emotional home atmosphere and fruit and vegetable consumption

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Objective:

Consumption of fruits and vegetables (FV) among adolescents falls below recommendations in many Western countries. The impact of socio and emotional aspects of family life on adolescent dietary behavior may contribute to this, yet remains under-investigated. This study examines the association between adolescents' perceptions of emotional home atmosphere (EHA) and their FV consumption frequency.

Design:

A food frequency questionnaire was used to assess FV consumption frequency. EHA was assessed by an eight item measure with three subscales: perceived home warmth, strictness and relational tension. EHA subscales were used as binary variables: a score equal to or above the median value was considered as a higher perception while a score below the median was considered as a lower perception of the EHA in question. Country differences in meeting the European 5/day recommendations are described. Further, the association between EHA and FV consumption frequency is investigated using multiple linear regression.

Setting: Regional examination centers in eight European countries.

Subjects: 3196 adolescents aged 12-18 years.

Results:

The mean FV consumption frequency was 3.27(SD = 2.84) times/day. Only 16.1% of boys and 18% of girls in our study sample met the recommendation of 5 times/day. After controlling for age, sex, education level of the parents and country of origin, perceived home warmth was associated with a 16% higher FV consumption frequency ($P < 0.001$; 95% CI 9-22).

Conclusions:

FV consumption frequency was suboptimal in the survey areas. Interventions targeting perceived warmth as a component of EHA could potentially have a positive effect on adolescents' dietary behavior.

Key messages:

- The home atmosphere may be an important driver of fruit and vegetable consumption.
- Fruit and vegetable consumption is often suboptimal and efforts should be made to target adolescent consumption behaviors.

Impact of an excise tax on the consumption of sugar-sweetened beverages in Catalonia, Spain

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Background:

Sugar-sweetened beverage consumption is contributing to the obesity epidemic. On 28 March 2017, Catalonia enacted a law levying an excise tax on sugar-sweetened beverages for public health reasons. The purpose of this study is to assess the impact of the tax on the consumption of sugar-sweetened beverages in Catalonia (Spain).

Methods:

Before-and-after study to assess changes in the prevalence of consumption of sugar-sweetened beverages among 1929 persons aged 12 to 40 years residing in low-income neighbourhoods of Barcelona (intervention) and Madrid (control). Beverage consumption frequency was ascertained via a validated questionnaire administered during the month prior to the tax's introduction (May 2017) and again at one year after it had come into force. The effect of the tax was obtained using Poisson regression models with robust variance.

Results:

While the prevalence of regular consumers of taxed beverages fell by 41% in Barcelona as compared to Madrid, the prevalence of consumers of untaxed beverages remained stable. The main reason cited by more than two-thirds of those surveyed for reducing their consumption of sugar-sweetened beverages was the increase in price, followed by a heightened awareness of their health effects.

Conclusions:

The introduction of the Catalonian excise tax on sugar-sweetened beverages was followed by a reduction in the prevalence of regular consumers of taxed beverages.

Key messages:

- This is the first study to show the efficacy of the Catalonian excise tax to reduce the prevalence of regular consumers of sugar sweetened beverages by residents of low-income neighbourhoods in Spain.
- Our results, along with the remaining scientific evidence on the subject, would justify the extension of the measure to the rest of Spain for public health reasons.

How the French Nutri-Score can impact sales of processed-foods? A complex system perspective

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Background:

Nutri-Score (NS) is France Front-of-Pack Food Labelling System to provide at-a-glance information about the nutritional quality of pre-packaged food products. Based on the Food Standards Agency nutrient profiling system, its algorithm generates a score by taking into account the presence of both the harmful and beneficial contents in food. In this presentation, we report on our analysis of the logic model of NS and on its potential impact on the production and marketing of processed foods.

Methods:

We reviewed the scientific and grey literature on NS to identify its potential mechanisms and loci of change. We also appraised the policy against Meadow's leverage points for system change.

Results:

The official adoption of the NS algorithm is instrumental in modifying both consumer food-related behaviours and food industry corporate practices. The algorithm takes 3 forms: 1) the front-of-pack logo indicating an integrated colour/letter score for the product, 2) mobile device applications which help consumers assess the nutritional value of food products even without an affixed logo, 3) nutritional parameters which influence food manufacturing decision-making in the industry. NS can trigger different drivers of corporate practice. From the current uptake trends, small and medium size food manufacturers appear more likely to welcome the NS Logo as a means to stand out against the multinational corporations presently dominating the market. As for the capacity of NS to transform the existing systems of producing and marketing processed foods, we find that it is mostly by changing the flow of information. NS presents new information, previously inaccessible to consumers, to support the population in making healthier food choices by providing a means for nuanced nutritional comparisons between food products of the same category.

Conclusions:

We conclude on the potential evolution of Nutri-Score and how its uptake by food corporations may be fostered.

Key messages:

- Nutri-Score's impact is through: the front-of-pack logo; nutrition apps; and as a parameter of food industry decision-making.
- Nutri-Score impacts the flow of information of the processed-food system.

Salt reduction in bread: Is it enough? Preliminary results of a HIA in Portugal

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Issue:

Health Impact Assessment (HIA) is a methodology that aims at assessing the impact of policies in health. A pilot HIA is in progress to kick off the implementation of this methodology in Portugal with the support of the World Health Organization (WHO). In this context, the impact of a nation-wide policy that intends to achieve a maximum of 1 g of salt/100 gr in bread is under assessment.

Description of the issue:

In 2017, Portugal approved a protocol between the industry and other stakeholders to gradually decrease the amount of salt in bread, as this is the main source of salt intake. The purpose of this study was to assess the impact in blood pressure from current (1.4 gr) to 1 g (29% reduction) of salt in bread. Data from two different surveys regarding blood pressure and salt intake was gathered. We estimated the decrease in blood pressure with respect to current average values according to sex, age, education and region.

Results:

It is expected that a reduction of 29% in salt intake through bread contributes to a general decrease in systolic pressure for normotensive people (from 120.4mmHg to 120.0mmHg, p = 0.85) and hypertensive people (from 151.0mmHg to 150.1mmHg, p = 0.68), although not statistically significant. Older hypertensive individuals (65 to 75 years) are the group with the largest benefit (152.8mmHg to 152.0mmHg) but no statistical difference was found. Disaggregation by sex, region and education also didn't show any statistical difference.

Lessons:

The impact in blood pressure from a 29% reduction in salt intake from bread seems very small. We found no statistical significance between the current and expected values in blood pressure either for total or group stratification. The absence of statistical effect might be due to sample size as our sources only allowed us to work with aggregated data.

Key messages:

- Quality and access to data is needed to assess impact of policies.
- to increase effects in blood pressure either salt reduction from bread must be larger or a wider range of products should be considered.

Joint associations of fruit and vegetable consumption and physical activity with mortality risk

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Background:

Fruit and vegetable consumption (FVC) and leisure-time physical activity (LTPA) are associated with better health outcomes but less is known about their joint associations with the risk of mortality. We examined the joint associations of FVC and LTPA with premature mortality among midlife and ageing municipal employees, adjusting for key covariates.

Methods:

Survey data collected in 2000–2002 among 40–60-year-old employees of the City of Helsinki, Finland, were linked with complete register data on mortality from Statistics Finland (4961 women, 1373 men; response rate 67%; written consent for register linkages 74%). FVC was dichotomised into daily or non-daily, and LTPA into high (>14 MET-hours/week including vigorous exercise) or low. Covariates included age, sex, marital status, socioeconomic position, binge drinking, smoking and self-rated health. Cox regression models were fitted. The follow-up continued until the event of death or the end of 2015.

Results:

A total of 281 deaths occurred during the follow-up. The mortality rate was 7.1% in men and 3.7% in women. A gender interaction was found, showing differing associations for women and men. Men with both daily FVC and high LTPA had the lowest mortality risk (HR 0.19, 95% CI 0.06-0.63) after adjusting for covariates. Men with high LTPA and non-daily FVC also had a lower mortality risk (HR 0.51, 95% CI 0.29-0.90) compared to those with non-daily FVC and low LTPA. Women with daily FVC and high LTPA had a lower mortality risk initially, but after adjusting for covariates no statistically significant associations were observed.

Conclusions:

The joint associations of FVC and LTPA with premature mortality differed between women and men. This could be related to gender differences in e.g. the causes of death, and further studies are needed to clarify this. Increasing FVC and LTPA might prevent premature mortality among men.

Key messages:

- Fruit and vegetable consumption jointly with physical activity decreased the risk of premature mortality among men only.
- Further studies are needed to clarify the gender difference which could be related to for example death causes.

Medical costs associated with childhood maltreatment history among Japanese older people

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Background:

Childhood maltreatment can have a significant impact on health across the life course, but its impact on health care costs in later life is unknown in Japan. This study aims to assess additional medical costs of Japanese older people with childhood maltreatment history.

Methods:

Data from the Japan Gerontological Evaluation Study (JAGES) 2013, a population-based cohort of independent people aged 65 years or older across Japan were used and linked uniquely with the database of health insurance claims for residents of a city with more than 1.5 million citizens, aged 75 years or younger (N = 978). Average annual medical costs for April 2012 and March 2013 and April 2013 and March 2014 were calculated and compared between those who experienced childhood maltreatment and those who did not, using generalized linear models.

Results:

4.5% of our sample witnessed their father physically abusing their mother, 1.9% were physically abused, 10.6% were emotionally neglected, and 5.7% were emotionally abused in their childhood. Average medical costs of those with any childhood maltreatment (N = 176, 18.0% of the sample) were significantly higher than those without maltreatment (549,468JPY vs. 413,013JPY (1USD is equivalent to 110JPY); p = 0.007). When examining the effect of each type of maltreatment, average costs of those with emotional neglect were higher than the counterpart (573,481JPY vs. 412,082JPY; p = 0.008). Average costs of those who experienced physical abuse were also higher than those who did not (726,254JPY vs 431,106JPY; p = 0.035). The effect of any childhood maltreatment remained statistically significant after older adults' age and gender were controlled (p = 0.03).

Conclusions:

Our findings suggest that childhood maltreatment is strongly associated with additional medical costs among older Japanese. If it was truly causal, it can be estimated that additional medical costs associated with childhood maltreatment can be more than 333 billion JPY per year nationwide.

Key messages:

- Average annual medical costs of older adults with any childhood maltreatment history were significantly 116,098 JPY greater than those with no maltreatment history.
- As for each type of childhood maltreatment, emotional neglect tends to increase medical costs in late adulthood.

Body size, Mental health and Inequalities: The burden of obesity in South Africa

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Background:

Given the substantial burden of obesity in South Africa, it is important to understand how specific aspects of socio-economic position influence the risk of unhealthy weight in different gender or ethnic groups.

Methods:

We investigated body mass index distributions among subjects aged 15+ years from the South African National Health and Nutrition Examination Survey. Determinants of underweight, overweight and obesity were studied in 1655 (73%) men and 3104 (74%) women who had data available on social and mental health characteristics. Logistic and multinomial regressions were used to study associations with weight categories.

Results:

Less than half of the subjects had healthy weight, 22% were overweight and 29% were obese. The proportion of healthy weight decreased and the risk of obesity increased with age up to 65 years. African women had a particularly high risk of overweight and obesity compared to men (age adjusted OR 4.65, 95% CI 3.94-5.50). The effect of gender was smaller in non-Africans (age adjusted OR 3.02, 95% CI 2.41-3.79; test for statistical interaction $p = 0.004$). Employment and higher education were associated with higher risk of overweight and obesity and a lower risk of underweight. Married subjects were at a higher risk of overweight and obesity. In men, higher income was associated with overweight and obesity. We found weak evidence of poor mental health being associated with unhealthy BMI.

Conclusions:

There are social gradients and gender and ethnic differences in how underweight, overweight and obesity are distributed in the South African population. A high prevalence of obesity among women and positive associations of education, employment and income with overweight and obesity call for investments into health literacy. Action is also needed to prevent undernutrition among socially disadvantaged groups, and men in particular.

Key messages:

- There are strong social gradients and important gender and ethnic differences in how underweight, overweight and obesity are distributed in the South African population.
- High prevalence of obesity in women and positive associations of socioeconomic position with obesity indicate poor health literacy. Undernutrition needs to be reduced among socially disadvantaged.

Trends of sarcopenia and physical activity in elderly Koreans using KNHANES 2007-2017

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Background:

Sarcopenia is one of risk factors for prevalence of chronic diseases which is associated with aging. Distribution of sarcopenia in Korea is important because Korea is one of the most rapid countries in population aging. This study aimed to understand trends in PA in elderly Koreans (≥65 years of age) and identify the proportion of sarcopenia in elderly Koreans based on a reference cutoff value of handgrip strength (28.6kg for men and 16.4kg for women).

Methods:

This study was performed using data from Korea National Health and Nutrition Examination Survey (KNHANES) between 2007-2017. Physical activity on walking (2007-2017), aerobic exercise (2014-2017), and muscle strength (2007-2017) were analyzed to understand trends of physical activity participation in elderly Koreans. Furthermore, using handgrip strength data from KNHANES (2014-2017), the study examined how sarcopenia has distributed in elderly in Korea.

Results:

The proportion of elderly Koreans engaged in walking decreased from 46.8% (age standardized) in 2007 to 35.7% in 2017, and the proportion of elderly Koreans engaged in aerobic exercise decreased 41.1% in 2014 to 29.4% in 2017. Even though, the proportion of elderly Koreans engaged in muscle strength increased from 11.6% in 2007 to 17.5% in 2017, the proportion of sarcopenia in elderly men increased from 22.6% in 2014 to 29.3% in 2017 and the proportion of sarcopenia in elderly women increased from 19.3% in 2014 to 30.1% in 2017.

Conclusions:

During the past 10 years, the participation in muscle strength has increased, while the participation in walking and aerobic exercise has decreased in elderly Koreans. Nevertheless, the proportion of sarcopenia in elderly Koreans has increased. This analysis provides evidence of necessity of public health efforts to implement sarcopenia reduction interventions and examine the correlation between sarcopenia and physical activity pattern in elderly Koreans.

Key messages:

- Although the participation of physical activity has decreased, the participation of muscle strength has increased in elderly Koreans (≥65 years of age).
- The increased proportion of sarcopenia in elderly Koreans showed the necessity of new public health intervention to reduce sarcopenia in spite of growing trends of muscle strength in elderly Koreans.

The Trends of Underweight in South Korean between 1998 and 2015

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Background:

Underweight is associated with increased mortality, relative to the normal weight category. The importance of managing underweight patients has not yet been recognized seriously in South Korea, and little information is available on the prevalence of underweight and its associated risk factors. This study aims to investigate changes in the prevalence of underweight by gender and age and analyze its trend.

Methods:

Data were obtained from individuals aged >20 years, from the Korean National Health and Nutrition Examination Survey between 1998 and 2015. The subjects of this study included 134,613 adults (male, 61,152; female, 73,461). The prevalence of underweight was determined as defined by the Asia-Pacific Perspective, and socioeconomic factors associated with a predisposition to underweight were analyzed using the chi-squared test and multiple logistic regression analysis.

Results:

Among Korean adults, the age-adjusted prevalence of underweight (body mass index <18.5 kg/m2) was 3.1% in men and 6.3% in women. Overall, a U-shaped relationship was established between the prevalence of underweight by gender and age. There was no significant difference in socioeconomic factors related to the prevalence of underweight in men and women in their twenties. The prevalence of underweight in women aged 20-59 years showed an increasing trend (P for trends <0.05).

Conclusions:

In individuals aged 20-29 years, the prevalence of being underweight was higher in women than in men. Recently, there has been an increasing trend in the prevalence of underweight young women of reproductive age. This requires national public health attention.

Key messages:

- Underweight in old age and young age requires nation wide public health attention.
- Especially thinness in young women in reproductive age must be considered as global health issue.

Evaluation of Malnutrition and Depression in Elderly People: An Epidemiological Study in Turkey

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Background:

Malnutrition is an important cause of morbidity and mortality. Malnutrition increases the number of hospitalizations and prolongs the length of hospitalization by disrupting organ functions, increasing the number and severity of infections and delaying wound healing. The aim of this study was to determine the frequency of suspected malnutrition in the elderly, to examine some related variables and to evaluate the depression.

Methods:

The study is a cross-sectional study conducted between March-April 2019 in individuals aged 60 years and older living in Sivrihisar. Sample size was calculated as 579. Cluster sampling method used. Data was collected by door to door in 4 neighborhoods determined by randomly. Mini Nutritional Assessment Test-Short Form (for malnutrition), Katz Daily Living Activities Scale (for dependency) and Geriatric Depression Scale-Short Form (for depression) were used. Chi-square test, Mann Whitney U test and logistic regression analysis were used for the analyzes.

Results:

The study group consisted of 220 (38%) women and 359 (62%) men. The mean age was 68.9±6.4 (ranged 60-93). Frequency of suspected malnutrition was 25% (n = 145). Being 80 years of age or older (OR:3.24, CI:1.53-6.85), having a primary and lower education level (OR:2.54, CI:1.32-4.90), history of chronic illness (OR:2.34, CI:1.33-4.03), using dentures (OR:1.62, CI:1.03-2.55) and suspected depression (OR:4.97, CI:3.17-7.78) are important risk factors for malnutrition. Those with suspicion of malnutrition had lower scores on DLA (z = 8.982;p = 0.001).

Conclusions:

Malnutrition was found to be an important health problem for the elderly. The frequency of suspected malnutrition is higher in individuals with depression. Those with suspected malnutrition have higher level of dependency. In order to reduce the frequency of malnutrition, it may be beneficial to increase the awareness of the elderly and caregivers and to give importance to the elderly nutrition of primary health care providers.

Key messages:

- Depression is an important risk factor for malnutrition.
- Malnutrition increases the dependence of the individual on daily activities.

2.S. Child and adolescent health

The Evaluation of Stigmatization and Related Factors in Students of Health-Related Faculties

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Background:

Individuals with disabilities are the people in which health inequalities are mostly experienced. Stigmatization of disabled people reduces their participation in society and causes insufficient health care. Not stigmatize disabled people by health care providers is important to eliminate this insufficiency. The aim of the study was to determine the stigmatization level and communication related factors of students educated in health-related faculties.

Methods:

This cross-sectional study conducted in 873 university students who educated in health-related faculties. The level of stigmatization was measured with Disability Stigma Scale(DSS) including the items used in study performed by Mclaughlin et al. The questionnaire consists of sociodemographics and items of contact with disabled persons(CDP) scale.

Results:

The mean age of study group was 20.19 ± 1.63, and the 71% were female. The prevelance of stigmatization for disabled people was 33.7%. Of 62.3% study group scored below the mean score from CDP scale. In univariate analysis, the prevelance of stigma was higher in the male group (p < 0.001), low education level group (p < 0.005) and low communication level group (p = 0.020). In multivariate analysis, the risk of stigma for disabled people increases 2.1 times (OR;95% CI, 1.53-2.85) in male group, reduces 0.70 times (0.53-0.93) in high education level parents group and reduces 0.98 times (0.97-0.99) in high communication level group.

Conclusions:

It was concluded that stigmatization against disabled people is very important issue for investigation and intervention in males, parents with low education groups and low communication level groups.

Key messages:

- Communication with disabled people is a very important factor that could be modified and improved for reducing the stigmatization about disabled people.
- Intervention studies are needed for reducing stigmatization against disabled people in students educated in health-related faculties to eliminate inequalities in health.

Socioeconomic disparities in diabetes prevalence and quality of care among Israeli children

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Background:

Despite Israel's universal health coverage, disparities in health services provision may still exist. We aimed to assess socioeconomic disparities in diabetes prevalence and quality of care among Israeli children, and to assess trends in these over time.

Methods:

Repeated cross-sectional analyses in the setting of the National Program for Quality Indicators in Community Healthcare that receives data based on electronic medical records from Israel's four health maintenance organizations. The study population included all Israeli children aged 2-19 years in 2011-2017 (for 2017: N = 2,364,374, including 2,914 with diabetes). Socioeconomic position (SEP) was measured using Central Bureau of Statistics data further updated by a private company (Points Business Mapping Ltd), and grouped into 4 categories, ranging from 1 (lowest) to 4 (highest). Using logistic regression, we assessed the association of SEP with diabetes prevalence, diabetes clinic visits, hemoglobin A1C (HbA1C) testing, and poor glycemic control (HbA1C> 9%), and assessed whether these changed over time. Models were adjusted for age, and sex.

Results:

Diabetes prevalence increased with age and SEP. SEP was positively associated with visiting a specialized diabetes clinic (OR SEP 4 vs. 1 2.53, 95% CI 1.72 - 3.70). Odds of HbA1C testing and odds of poor glycemic control were negatively associated with SEP (OR SEP 4 vs. 1: 0.54, 95% CI 0.40 - 0.72 and OR SEP 4 vs. 1: 0.25, 95% CI 0.18 - 0.34 respectively). Disparities were especially apparent among children aged 2-9 (4.6% poor glycemic control in SEP 4 vs. 40.8% in SEP 1). Poor glycemic control decreased over time, from 44.0% in 2011 to 34.8% in 2017.

Conclusions:

While poor glycemic control rates among children have improved, significant socioeconomic gaps remain. It is eminent to study the causes of these disparities and develop policies to improve care provided to children in the lower SEP levels, to promote health equity.

Key messages:

- Major socioeconomic inequalities in the control of diabetes among children in Israel remain despite universal health care coverage.
- The rate of uncontrolled diabetes among Israeli children has improved over time.

Family environment risk factors for overweight in childhood

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Background:

One of the current public health problems in Bulgaria is the high prevalence of overweight and obesity in childhood. The family environment affects many aspects of children's health and well-being. The unfavourable socio-economic characteristics of the family environment might be a risk for overweight and obesity in childhood.

Methods:

A national representative survey was conducted in Bulgaria in 2016 as part of the WHO European Childhood Obesity Surveillance Initiative (COSI). 3379 schoolchildren were recruited. The average age of the sample was 7.7 years, equally distributed by gender - girls 50.11% (n = 1693) and boys 49.89% (n = 1686). The data from the filled in Family form was analysed with SPSS using descriptive statistical methods.

Results:

The study identified the following risk factors of the family environment for the development of overweight in childhood: the proportion of parents with elementary or primary education was significant - about a quarter, nearly one third of the surveyed households were experiencing financial difficulties, 14.1% of the women and 11.6% of the men were unemployed in the last 1 year. There was a high incidence of co-morbidity among family members: hypertension - 27.7%, diabetes mellitus - 14.4% and hypercholesterolemia - 13.6%. Among the surveyed parents 28.4% of the women and 68% of the men were overweight. Only 13.5% of the parents estimated the weight status of their child as overweight (with objectively measured overweight among 29.2% of the recruited children). A significant proportion of the children were not breastfed (17.3%) or the duration of exclusive breastfeeding was not optimal for 67.8% of the exclusively breastfed children.

Conclusions:

Identifying family risk factors associated with overweight in childhood is important for the public health and provides opportunities to develop policies for improvement of the nutritional and health status of children.

Key messages:

- To tackle the childhood obesity epidemic the family risk factors should be addressed.
- The awareness of the children and parents should be raised through targeted information materials and campaigns.

Factors associated with self- and other-directed aggression in Slovak adolescents

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Background:

We investigated differences in intrapersonal and interpersonal characteristics of adolescents with and without reported aggressive behaviours (AB). We distinguished two types of intrapersonal factors (self-esteem (SE), self-control (SC)) and three types of interpersonal factors (prosocial peers (PP), supportive relationships at home (SRH), supportive relationships at school (SRS)). We separately examined self-directed aggressive behaviours (self-destructive thoughts, self-destructive behaviour) and other-directed aggressive behaviours (using vulgar words, fighting, physical harm, intimidation, mockery of classmates).

Methods:

A representative sample of 1101 adolescents (50.1% female, mean age of 13.5 years) was collected from primary schools in Slovakia. The respondents completed the SE Scale, the SC Scale, the Resilience and Youth Development scale and they were also asked about the frequency of AB. In each form of AB (self- and other-directed) two groups were created: those who reported some AB and those who did not report any AB. Descriptive statistics and nonparametric tests were used for the data analysis.

Results:

Almost 75% of the adolescents reported some AB towards others and 41% reported self-harming thoughts or behaviours. Statistically significant differences were observed for both self-directed AB (SE: $p<.001$, SC: $p<.001$, PP: $p<.001$, SRH: $p = .013$, SRS: $p<.001$) and other-directed AB (SE: $p = .034$, SC: $p<.001$, PP: $p<.001$, SRH: $p = .039$, SRS: $p = .016$). In all cases adolescents who reported AB typically had a lower level of intrapersonal and interpersonal variables compared to those who did not report AB.

Conclusions:

The study contributed to the understanding of factors linked to aggressive behaviour of adolescents and confirmed the associations with self-esteem, self-control, supportive relationships at home and at school and having prosocial peers.

Key messages:

- Aggressive behaviour of adolescents can be linked to interpersonal and intrapersonal relationships.
- The above holds for both self- and other-directed aggression.

Suicidal ideation among Tunisian adolescents and the association with adverse life experiences

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Background:

Youth suicidality is a significant public health problem. Understanding the factors leading to suicide is essential to implement effective preventive efforts. In this context, this study was conducted to assess the link between suicidal ideation and adverse life experiences among Tunisian school aged youth.

Methods:

A cross-sectional survey was conducted among a sample of 2020 secondary school adolescents in 2016. An anonymous self-administered questionnaire was used to collect data. The adverse life events measured were: domestic violence, parental divorce, physical aggression, sexual abuse and a familial antecedent of suicide.

Results:

Overall, 17.0% (95% CI [15.3%-18.6%]) reported having suicide ideation during the past 12 months with no gender difference (16.3% among girls and 17.3% among boys, p = 0.62). Among the participants, 26.7% experienced at least one adverse life experience. Those who reported domestic violence (Odds Ratio = 8.93; 95% CI = 6.84–11.66), parental divorce (Odds Ratio = 3.02; 95% CI = 1.57–5.79), physical aggression (Odds Ratio = 6.97; 95% CI = 5.14–9.46), sexual abuse (Odds Ratio = 8.69; 95% CI = 3.94–19.15), familial antecedent of suicide (Odds Ratio = 8.17; 95% CI = 5.75–11.60) were associated with increased odds of suicide ideation.

Conclusions:

The prevalence of suicidal ideation observed in the survey area was relatively high and associated with all the measured life adverse events. These factors should be included in a suicide screening tool to be integrated in a suicide prevention program.

Key messages:

- Suicidal ideation among adolescents was associated with all the measured life adverse events.
- Identifying adolescents at higher risk of suicide and help them to cope with their adverse experiences could be effective to prevent taking action to attempt suicide.

Mood disorders with onset in early adulthood and socio-economic outcomes over the long run

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Background:

Mood disorders have been associated with poor socioeconomic outcomes, but there is a lack of large-scale population-based studies on the topic. We examined associations between bipolar disorder and depression with an onset between ages 15 and 25, and subsequent socio-economic outcomes (employment, income and educational attainment) using Danish registry data.

Methods:

All individuals (n = 2 390 127; 49% women) born in Denmark between 1955 and 1990, who were alive at their 25th birthday were included. Employment status, wage or self-employment earnings, and educational attainment were assessed annually from the age of 25 to 58 (years 1980 to 2015). Mood disorder diagnosis was obtained from the Danish Psychiatric Central Register. The associations were examined using logistic regression analyses.

Results:

At the age of 30, 46% of individuals with bipolar disorder and 35% of individuals with depression were not employed, and 52% of individuals diagnosed with bipolar disorder and 42% of individuals with depression did not have any secondary or post-secondary education. Bipolar disorder and depression were associated with increased and increasing risk (at age 30: bipolar disorder, OR 7.21, 95% CI 6.54 to 7.96; depression, OR 4.07, 95% CI 3.93 to 4.22) of not being employed over the follow-up. Similarly, both bipolar disorder and depression were associated with increased risk of not completing secondary or post-secondary education (at the age of 30, bipolar disorder: OR 3.21, 95% CI 2.92 to 3.54; depression: OR 2.81, 95% CI 2.71 to 2.91), but this difference become smaller over the follow-up. An individual with bipolar disorder or depression earned around 36% and 51%, respectively, of the earnings earned by an individual without mood disorders.

Conclusions:

Mood disorders diagnosed in early adulthood are associated with lasting poor socioeconomic outcomes over the long run.

Key messages:

- Early onset mood disorders are associated with consistently, and in some cases increasingly, poorer socioeconomic outcomes over time.
- An individual with early onset bipolar disorder or depression earned around third and half, respectively, of the earnings earned by an individual without early onset mood disorders.

Intrapersonal/interpersonal factors related to alcohol use and smoking cigarettes among juveniles

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Background:

While there is consistent evidence that an early initiation of smoking and alcohol consumption is associated with a whole range of future negative outcomes, relatively little attention has been directed at a specific population of very young adolescents (10-12 years old). This study aimed to explore the relationships between alcohol use, smoking and intra/interpersonal factors among primary school pupils.

Methods:

In this study (APVV-0253-11, APVV-15-0662) a representative sample of 572 early adolescents from a stratified random sample of 12 primary Slovak schools (50.1% boys, Mean age = 12.49; SD = 0.59) was used. The respondents indicated their lifetime prevalence of smoking SM and alcohol use AU (dichotomized: 0-not used, 1-used) which was used as an outcome variable. Expectations of the effect of smoking and alcohol use (positive or negative), self-control and cigarette and alcohol refusal were used as the independent variables. Binary logistic regressions were performed and carried out separately for boys and girls.

Results:

All 4 models were statistically significant for males (AU = 15.318, $p < 0.01$, 9.8%, SM = 17.807, $p < 0.01$, 9.8%) and also for females (AU = 25.204, $p < 0.001$, 16%, SM = 47.05, $p < 0.001$, 24.7%). The models showed that for boys there were significant associations between smoking refusal and smoking cigarettes 95%CI = 0.845-0.97 and alcohol refusal and alcohol prevalence 95%CI = 0.78-0.95. For girls, significant associations were found between smoking refusal and smoking cigarettes 95%CI = 0.75-0.92, alcohol refusal and alcohol prevalence 95%CI = 0.72-0.95, positive expectations 95%CI = 1.04-1.20, negative expectations 95%CI = 0.78-0.94, self-control 95%CI = 0.91-1.00 and alcohol prevalence.

Conclusions:

This study supports the importance of the specific role of refusal skills for both genders as well as the importance of the role of expectations and self-control with respect to gender differences.

Key messages:

- Implementation of the findings regarding the importance of specific refusal skills towards alcohol use and smoking among both genders might be important for effective targeting of prevention programs.
- The results show a similar trend regarding smoking which was observed among both genders but this was not seen in alcohol use.

What should parents do to emphasise their disapproval of adolescents’ substance use?

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Background:

Previous research has shown that one of the strongest predictor of smoking and alcohol consumption in early adolescence is perceived parental approval of such behaviour. The aim of the present study is to explore which parenting practices predict the probability of perceiving parental disapproval of smoking and alcohol consumption in adolescence.

Methods:

A representative sample of 1133 early adolescents (mean age = 12.9, SD 0.77) filled in questionnaires including sociodemographic characteristics (3 items), perceived parental risk behaviour (alcohol consumption at least once a week, drunkenness once a month and daily smoking); substance specific conversations with parents (1 item); both emotional and controlling aspects of parenting (6 items), and perceived parental disapproval of adolescents’ smoking and alcohol consumption as dependent variables. Logistic regression was used to analyse the data.

Results:

The most important predictor of perceived parental disapproval of alcohol use was behavioural control (setting rules) (OR 2.34), followed by parental non-drinking (OR 1.81) and alcohol specific communication (OR 1.28). Regarding smoking disapproval, the significant predictors were parental non-smoking (OR 1.92); behavioural control (OR 1.79); time spent with a child (OR 1.44) and lower psychological control (guild induction, pressuring, manipulation) (OR 0.69).

Conclusions:

Decreasing adolescents’ substance use via increasing their perceived parental disapproval of such behaviour seems to be substance specific. The most salient strategy both for smoking and drinking seems to be the use of behavioural control characterized by clear rules setting and lack of parental own substance use.

Key messages:

- Decreasing adolescents’ substance use via increasing their perceived parental disapproval of such behaviour seems to be substance specific.
- The most salient strategy to increase perceived parental disapproval of smoking and alcohol consumption seems to be the use of behavioural control characterized by clear rules setting.

Adolescent tooth brushing frequency evolution (2006-2014), risk factors and causality hypothesis

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Objectives:

To analyze the evolution of tooth brushing frequency (TBF) as well as the impact of socio-economic status and health behaviors between 2006, 2010 and 2014 among adolescents from the French Health Behavior in School-aged Children (HBSC) cross-sectional studies.

Methods:

We included 18727 adolescents aged 11, 13 or 15 years old (y/o). The relationship between TBF and variables such as eating habits, health and socio-economic status markers as well as their evolution over the 3 studies were analyzed using logistic regression. We used directed acyclic graphs (DAGs) to represent the potential chain of causality between TBF, its associated factors, as well as latent variables such as the risk for oral diseases.

Results:

Proportion of adolescents brushing twice a day increased from 68.8% in 2006 to 70.8% in 2010 and 78.8% in 2014 ($p < 0.0001$). Notable predictors ($p < 0.0001$) were being a girl (adjusted Odd Ratio = 1.5) and even more an older girl (aOR 1.5 for 15y/o vs 11 y/o girls), having breakfast and fruits daily (aOR 1.4 and aOR 1.6), excellent perceived health (aOR 1.2), obesity or overweight (aOR 0.6), being bullied at school (aOR 0.8) and perceived family wealth (aOR 1.4 for High vs Low). Impacts of these predictors were stable over the 3 studies. DAGs highlighted the fact that a low TBF and its associated risk factors described a high-risk population for poor oral and global health. Variables at the origin of those risks seemed to be age, sex, familial environment, socio-economic environment and education.

Conclusions:

TBF among French adolescents improved from 2006 to 2014. This may be linked with global prevention programs developed during this time period. These programs should be associated with more specific ones targeted towards and adapted to disadvantaged populations to diminish inequalities. The use of DAGs is a powerful tool to identify the origin of those inequalities as well as the right factors to target in order to achieve efficient prevention.

Key messages:

- Global and specific prevention programs should be associated to allow a global improvement in tooth brushing as well as a diminution of inequalities.
- Use of specific statistical tools can help identify specific trends in health behaviors and alterable risk factors.

Adolescent suicide behaviour profiles: comparing unplanned attempts, planned attempts and ideation

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Background:

Suicide is the second leading cause of death for young people worldwide. A significant amount of suicide attempts is known to be unplanned, but research on unplanned attempts among adolescents is limited. As knowledge on the profile of unplanned suicide attempts is crucial for effective prevention efforts, this study aims to characterize and compare three suicide behaviour profiles among adolescents: planned attempts, unplanned attempts and ideation without attempt.

Methods:

Data from the 2014 Luxembourgish Health Behaviour in School-aged Children study was used. 879 adolescents aged 12 to 18 years old are included in this study. Data was gathered using paper questionnaires. ANOVAs with Games-Howell post-hoc tests were conducted for 18 independent variables, using the suicide behaviour variable as the dependent variable.

Results:

Unplanned attempters report higher levels of parental and classmate support ($p < 0.01$), fewer health complaints ($p < 0.001$), higher life satisfaction ($p < 0.01$) and a more positive body image ($p < 0.01$) than planned attempters and ideators. Unplanned and planned attempters are younger than ideators ($p < 0.01$) and report more substance use and physical fighting than ideators ($p < 0.01$).

Conclusions:

Unplanned attempters report better health (behaviour) and more social support than planned attempters and ideators. Unplanned attempters and planned attempters have higher levels of risk behaviour than ideators. Prevention efforts should be mindful of similarities and differences between the behaviours, and identify and address at risk adolescents accordingly.

Key messages:

- Unplanned attempters have better health (behaviour) and more social support than planned attempters and ideators.
- Results are incorporated in the Luxembourgish national plan for suicide prevention.

Association between positive mental health and family background among young people in Finland

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Background:

Positive mental health (PMH) is an important construct for understanding the full continuum of mental health. The aim of this study was to examine the association of family background with the level of PMH among adolescents and young adults in Finland.

Methods:

Data from population-based Finnish School Health Promotion Study targeted at year 8. and 9. students of comprehensive school and year 1. and 2. students of upper secondary school and vocational schools was used (n = 134684) for the study. PMH was measured with short Warwick-Edinburgh-Mental-Wellbeing-Scale (SWEMWBS) and examined on a continuum from languishing (low level of positive mental health) to moderate to flourishing mental health (high level of positive mental health). Associations between flourishing/languishing mental health and family background variables were analysed with logistic regression analysis, school level and gender were adjusted.

Results:

Flourishing mental health was associated with intact family background, higher education of parents and better financial situation of family. In contrast, languishing was associated with non-intact family conditions (single parent family, parents divorced, stepfamily) and parents' unemployment, lower level of education and financial problems.

Conclusions:

Family structure and socioeconomic status of parents have an impact on PMH of young people. Young people with non-intact family structure and/or poorer socioeconomic status may lack positive sense of well-being, in other words they have challenges to enjoy their life, to believe in their own abilities, to cope with normal stresses of life, to study productively and to enjoy interacting with others. Targeted interventions and promotive actions should be directed for young people with challenging family conditions in particular.

Key messages:

- Investigating positive mental health (PMH) is essential for understanding the full continuum of mental health.
- Family structure and parents' socioeconomic status have an impact on PMH of young people.

Social capital and students' health: results of the splash study

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Background:

Universities around the world are challenged with rising rates of mental health problems among their students. Cumulative evidence demonstrated that aspects of the social environment, including social capital, play an important role in mental health. This study aimed to determine the prevalence of depressive symptoms among university students from across the globe and to investigate whether social capital was associated with depressive symptoms in university students.

Methods:

A cross-sectional study was conducted in Albania, Brazil, Germany, Italy, Malaysia Oman, South Korea, Switzerland, Taiwan and the USA in 2018/2019. Data were obtained through self-administered questionnaire, including questions on sociodemographic characteristics and depressive symptoms. The BDI-S was used to assess the presence of depressive symptoms. Multilevel analyses were conducted to assess the relationship between social capital and depressive, adjusting for individual covariates (e.g. perceived stress and health behaviours) and country-level characteristics (e.g. democracy type).

Results:

A total 3894 students participated. Out of all participants almost 47% presented clinically relevant depressive symptoms. The prevalence of depressive symptoms was highest among students identifying as other than male or female (48.7%), among students with low socioeconomic status (59.5%) and among students with low levels of cognitive (65.3%) and behavioural social capital (57.0%). Even after adjustment in multilevel logistic regression analyses, depressive symptoms remained significantly associated with low levels of cognitive social capital (OR = 1.49, 95% CI: 1.06 to 2.10) and low level of behavioural social capital (OR = 1.36, 95% CI: 1.08 to 1.71).

Conclusions:

Social capital may play an important role in mental health problems in the university setting. The study identified significant opportunities for future research and health promotion strategies among students.

Key messages:

- Key factors associated with depressive symptoms among university students were low levels of behavioural and cognitive social capital.
- Health promotion programs targeting young persons with depressive symptoms should include effective components of social epidemiology such as social capital.

3.R. Health in education: from childcare to college

Developing a regional strategy to disseminate physical activity promotion in childcare centers

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Background:

Despite increasing efforts to promote physical activity (PA) in childcare centers, compliance with PA guidelines remains low. QueB is an intervention to promote children's and teachers' capabilities for PA. In QueB1 (2015-2018) a significant increase in children's and teachers' PA (steps/hour) in 12 childcare centers in Germany was achieved. The aim of QueB2 (2018-2021) is to establish strategies to disseminate the intervention in one region and to gain access to hard-to-reach childcare centers.

Methods:

A regional system of multipliers is built up in a participatory process. Structured discussions with stakeholders (childcare consultants, supervisors) are conducted to find out what role they can play in accessing hard-to-reach childcare centers and what support they need for that. In addition, workshops with teachers from different childcare centers are organized to identify their needs and to create a regional peer-to-peer network.

Results:

PA plays only a small role in the work of childcare consultants and supervisors. However, they could give a first impulse as they have regular contact to different childcare centers. Therefore, they need a simple assessment tool that helps them identify childcare centers' need for support and some tailored information material they can share. In addition, the idea of ''PA champions'' was developed: Teachers from childcare centers that have already taken part in QueB will be qualified as peer-to-peer-counselors and invite other teachers for work shadowing or to join the network.

Conclusions:

Strategies to disseminate PA promotion in childcare centers have to involve peers as well as regional multipliers. A simple assessment tool that helps identify childcare centers' needs and an online toolbox with diverse supporting material for multipliers and childcare centers are developed.

Key messages:

- QueB2 will result in regional structures that support the PA promotion of childcare centers.
- The involvement of peers and multipliers is the key to meeting the needs of childcare centers.

'The Pyramid of Success'' the health promotion program for school- children with visual impairment

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Issue/problem:

Young people with visual impairment (VI) are more likely to have low literacy comparing to the rest of population. Additionally, they are at the high risk of obesity what has been attributed to poor food choices or lack of physical activity. Hence, interventions to support their nutrition status are needed.

Description of the problem:

One hundred eighty six students aged 10-18 years ($M = 13.9$; $SD = 2.44$) selected from 6 schools for pupils with VI. An intervention describing healthy lifestyle guidelines was performed. Two innovative tools concerning nutrition guidelines tailored to the needs of people with VI were used during intervention: The Healthy Lifestyle Pyramid (HLP) and the Puzzle Game (PG). Participants were devoted to the Control Group (CG; $N = 94$) where only HLP was used and the Study Group (SG, $N = 92$) who participated in the classes with both tools: HLP and PG. Before and just after intervention a single-choice questionnaire regarding health literacy comprising 15 questions was used to verify the level of required knowledge regarding nutrition.

Results:

There was a significant main effect of using HLP in the CG $F(1. 132) = 14.524$, $p < 0.001$. The main effect of using HLP and PG in the SG was also significant, $F(1. 132) = 6.188$, $p = 0.014$. The actual difference in mean scores between SG and CG was medium. The effect size, calculated using partial eta squared, was .045.

Lessons:

The interventions with tools tailored to the needs of people with VI had positive significant impact on nutrition knowledge. Health promotion activities focusing on the health literacy improvement are more effective when various approaches are used to present information. Future health promotion activities should be adjusted to the needs of different populations to provide an equal access to healthy behaviours and to enhance health literacy.

Key messages:

- Using tools tailored to the needs of people with VI provide an equal access to health promotion.
- Health promotion activities are more effective when range approaches are used to present information.

Food and lifestyle education at primary and secondary school: an Italian project on health promotion

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Background:

Nutrition and life styles have a crucial role as health determinants. In particular, an intervention on eating habits and physical activity/inactivity does heavily influence obesity and overweight prevention, alongside associated diseases. Preteen and teenage profile is critical for developing the state of health in adulthood, and it is heavily determined by the sociocultural family background. For this reason, school could become an important actor in health promotion, in the form of coordinated and cross-disciplinary courses about food and behaviors. The aim of the study is to verify the effect of an intervention of food education in several schools.

Methods:

This cross-sectional study, originated from the ''sCOOL FOOD'' project of Monte dei Paschi Foundation of Siena, involves schools of southeastern Tuscany, Italy. The project currently engages various classes from primary and secondary schools in which year-round awareness campaigns are conducted. The activities consist in theory classes and workshops held by professionals or teachers of the school previously trained for the purpose. A same questionnaire was administered to families before and after each campaign, exploring eating habits, lifestyle and biometrics. The data analyzed so far date from October 2017 to May 2018. Wilcoxon signed-rank test was performed on the distributions of children BMI classes, defined according to IOTF cutoffs, obtained exclusively from participants who submitted both questionnaires.

Results:

308 paired records of data were collected as mentioned above. We found that, after the campaign, children BMI classes distribution shift towards reduction was statistically significant ($z = -2.053$; $p < 0.05$).

Conclusions:

Since the intervention was able to influence a childhood health determinant, it could be an opportunity to compensate those family dynamics that could lead towards health disadvantages in adulthood.

Key messages:

- A coordinated and cross-disciplinary food and lifestyle year-round education campaign at school can impact on health determinants of children.
- School can correct unfavorable eating and lifestyle behaviors determined by family habits.

Obesity prevention - is school an effective place? A systematic review

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Background:

Juvenile and childhood obesity or overweight are associated with various secondary diseases and physical limitations, as well as with the effects of discrimination and social exclusion. The early prevention of obesity remains a key area of action worldwide. Schools are considered as a classical setting. The analysis focuses on the effectiveness of interventions, the identification of effective components and conditions as well as barriers. The aim is to provide a differentiated presentation of the current study situation.

Methods:

The systematic literature search in eleven databases included studies in English and German published in 1990 to 2015. A control group and posttest data were obligatory. Evaluated outcome measures must map effects on the prevalence of obesity (e.g., BMI, body fat percentage, waist-to-hip ratio). Included full texts were evaluated with the instrument ROBINS-I. Due to the heterogeneity of studies (especially in terms of design, intervention and outcomes) results were analysed qualitatively.

Results:

48 primary studies were included of which most studies report data on changes in mean BMI over time, and show predominantly (small) effects in favour of the intervention. Almost all identified interventions include behavioral measures, most of them combine the fields of nutrition and physical activity, with behavioral prevention being over-represented in particular in activities addressing nutrition.

Conclusions:

The results allow the conclusion, that school-based measures to prevent obesity are effective in terms of anthropometric outcome measures, but to a limited extent. There is clear evidence that the effects achieved tend to be maintained beyond the intervention. There are also clear indications for the cost-effectiveness of school-based obesity prevention. The studies from this field of research have clearly gained in quality over the years and are now flanked by health economic analyses.

Funded by DIMDI

Key messages:

- School-based measures to prevent obesity are effective in terms of anthropometric outcome measures, but to a limited extent.
- In order to fully realize its potential, school-based measures to prevent obesity should be accompanied by interventions at other levels, like the health-promoting design of living environments.

Effectiveness of a drug use prevention program on alcohol use and drunkenness among schoolchildren

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Introduction:

Unplugged is a universal drug prevention program consisting of 12 lessons and intended for primary schools. In the school year 2017/2018, Unplugged was implemented in the Slovak Republic in the 7th grade.

Objective:

To examine the effectiveness of Unplugged on lifetime prevalence of drunkenness and alcohol use during the last 30 days as well as the moderation effect of gender in these relationships. Furthermore, the role of smoking in relation to alcohol use and drunkenness was monitored.

Methods:

The study has been designed as a cluster randomized controlled trial with data collection before the program implementation and immediately after the implementation. In total, 486 schoolchildren participated in the trial ($M = 13.05$; 49.6% boys) and were randomly assigned to either an experimental ($N = 277$) or control group ($N = 209$). Binary logistic regression was applied and adjusted for gender and baseline risk behaviour.

Results:

There was no significant effect of Unplugged and no moderation effect of gender with regard to lifetime prevalence of drunkenness. However, smoking was also reported by those schoolchildren who reported drunkenness (OR 6.735; 95%CI 3.210-14.132). A significant program effect was found regarding the prevalence of alcohol use during the last 30 days. The schoolchildren in the experimental group had lower alcohol use in comparison to the control group (OR 0.501; 95%CI 0.253-0.993). The moderation effect of gender showed that the program had an effect on alcohol consumption in boys. After completing Unplugged, alcohol consumption in boys decreased significantly (OR 3.222; 95%CI 1.158-8.962). The results also confirmed that smoking is related to the prevalence of alcohol use during the last 30 days (OR 3.109; 95% CI 1.226-7.885).

Conclusions:

The findings confirmed that Unplugged reduced alcohol use among boys. It has been also shown that smoking is a significant predictor of alcohol use and drunkenness.

Key messages:

- The findings point to the role of gender differences in the effectiveness of a prevention program.
- The effectiveness of the preventive program is more pronounced for those schoolchildren who are more likely to use alcohol before the program, especially boys.

Adopting healthy habits through the collaboration of health, education and culture systems

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Background:

The 'Adopt healthy habits' program is a health promotion program that links the health system, education system and the City of Zagreb library. It is based on the association of mental, physical and emotional health factors. It is done through work in smaller groups, using educational interactive materials and methods with selected books in accordance with the topic of the workshop and with the practice of applying the adopted knowledge.

Methods of work:

The methodological basis of the programs are health workshops conducted in the libraries of the City of Zagreb in cooperation with the primary schools. They imply working with students by acting on risk factors: obesity, physical inactivity, smoking and low self-esteem. The skills used are promoting health, cognitive-behavioral methods, health education, kinesiology, nutrition and bibliotherapy.

Objectives:

Educating students about the importance and ways of adopting healthy habits and gaining self-esteem and reducing the occurrence of risky behaviors. Long-term objectives are improvement of the psychophysical development of students, increase of the population of the City of Zagreb with balanced dietary habits and regular physical activity and normal body mass index and reduction of the occurrence of chronic non-communicable diseases in adulthood.

Results:

In the period from 2015 to 2018, a total of 141 workshops were conducted through which 3,106 pupils were educated. The workshops were conducted in 12 primary schools of the City of Zagreb and 5 of the related city libraries.

Conclusions:

Interactive approaches in the creative environment proved to be the most appropriate in educative work with children. It is necessary to continue to implement this form of primary prevention on a wider population.

Key messages:

- Adopting healthy habits in childhood is the basis for primary prevention of chronic non-communicable diseases.
- Multidisciplinary approach to health education in youth assures a more permanent adoption of positive health behavior.

School ethos and recurring sickness absence: a multilevel study of ninth grade students in Stockholm

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Background:

A non-negligible proportion of Swedish students is recurrently absent from school due to various health problems. Recurring absence from school has potentially severe consequences for future prospects. Thus, identifying factors that may contribute to counteracting recurring sickness absence among students is important. The aim of this study was to investigate whether higher levels of teacher-reported school ethos were associated with lower levels of recurring sickness absence among their students, when adjusting for relevant confounders at the student- and the school-level.

Methods:

Data from four cross-sectional surveys performed in 2014 and 2016 were combined. The Stockholm School Survey was carried out among 9,298 ninth grade students (ages 15-16 years) in 147 school units, and the Stockholm Teacher Survey was performed among 2,024 teachers in the same units. School ethos was captured by an index of 12 teacher-reported items that was aggregated to the school-level. Recurring student sickness absence was based on self-reports and defined as absence on >10 occasions during the current school year. Student-level control variables were gender, family structure, parental education, parental unemployment and migration background. School-level control variables were sociodemographic composition and student-teacher ratio. Two-level logistic regressions were performed.

Results:

About 9.5% of the students reported recurrent sickness absence. Students attending schools with higher levels of teacher-rated school ethos had a lower likelihood of reporting recurring sickness absence compared with those attending schools with lower levels of ethos, even when adjusting for potential confounders at the student- and the school-level (OR 0.78, p = 0.015).

Conclusions:

Recurring sickness absence was less common among students attending schools with higher levels of teacher-rated ethos. The findings suggest that schools have the capacity to promote student health.

Key messages:

- A strong school ethos was linked with lower levels of recurring sickness absence among the students, even when adjusting for potential confounders at the student- and the school-level.
- A strong school ethos may contribute to counteracting recurring sickness absence among students.

Effects of educational policy on unhappiness of middle and high school students in Korea, 2006-2016

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Background:

Educational policies may have a substantial impact on health and well-being of students, who spend most of their daily lives at school. Policies on secondary education in Korea has changed in the late 2000s, which diversified college entrance exams (CEEs) and made the National Curriculum (NC) more autonomous to mitigate students' burden of preparing for CEEs. This study aimed to estimate effects of educational policy changes on unhappiness, which is known to be associated with health status such as mortality, morbidity, and prognosis, of students in secondary education.

Methods:

Using repeated cross-sectional self-reported data of 773,362 students in the Korea Youth Risk Behavior Web-based Survey during 2006-2016, cross-classified random effects models were fitted to estimate the fixed cohort effects of educational policy changes on unhappiness while considering individual factors and random effects of periods and grade cohorts.

Results:

Students' unhappiness increased when the NC began to become autonomous (odds ratio [OR] 1.21, 95% confidence interval [CI] 1.03-1.42), but it increased less after the autonomous NC was fully applied (OR 1.14, 95% CI 0.92-1.42). Two times of diversification of CEEs increased unhappiness (OR 1.21, 95% CI 1.06-1.38 for the first diversification and OR 1.33, 95% CI 1.07-1.67 for the second diversification). Unhappiness was high in students with high stress level (OR 7.59, 95% CI 7.43-7.75), low academic performance (OR 1.48, 95% CI 1.44-1.52), and low household economic status (OR 2.32, 95% CI 2.26-2.39).

Conclusions:

Enhancement of autonomy of the NC and diversification of CEEs increased students' unhappiness. Educational policy changes that diversified competencies required for college admission might result in an increase in academic burden in the context of Korea, where entrance into prestigious universities is crucial for success in life. Improvement of educational policy is needed to increase students' happiness.

Key messages:

- Educational policies may have a substantial impact on health and well-being of students, who spend most of their daily lives at school.

- Education policy changes in Korea increased students' unhappiness, which might be due to an increase in academic burden resulted from diversification of competencies required for college admission.

Satisfaction with health and oneself and the Unplugged program among Slovak Schoolchildren

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Background:

The investigation of protective factors and intervention effects on health are important issues of prospective studies. The aims of this study were to explore the changes in schoolchildren's satisfaction with their health and themselves (SH) following their participation in the Unplugged program (PU).

Methods:

This study was carried out as a cluster randomized controlled trial (1195 participating schoolchildren, Mean age = 11.52; 47.4% boys) with data collection conducted immediately before PU implementationT1, immediately after the implementationT2 then 3 monthsT3, 12 monthsT4, and 18 months after the implementationT5. The schools were randomly assigned to either an experimental (EG, n = 540) or control group (CG, n = 655). EG was exposed to PU consisting of 12 lessons (http://www.eudap.net/). The effect of participating in PU, gender, and self-efficacy (SET1) were explored in relation to changes in SH in both EG and CG. GLM Repeated Measures were used for the data analyses.

Results:

There was a significant main effect of time on SH, $F(4, 1096) = 6.685$, $p < 0.001$. The contrast analysis revealed that SH was significantly lower at every follow-up when compared to SH at T1. There was a significant interaction effect SHxSE, $F(4, 1096) = 2.868$, $p < 0.05$. The contrast analysis revealed that SH was significantly lower at T2 than at T1 among the schoolchildren with a lower level of SE. Finally, the SHxSExPU interaction was significant $F(4, 1096) = 2.779$, $p < 0.05$ and the contrast analysis revealed that SH was significantly higher at T5 than at T1 among those participants of PU with a higher level of SE.

Conclusions:

The findings generally suggest that while there was a decrease of SH among schoolchildren between T1 and T5 a long-term effectT5 of PU was found among the program participants with higher levels of SE who were able to maintain higher level of SH.

Key messages:

- Schoolchildren's satisfaction with their health and themselves was found to generally decrease in time during the 22 months when Unplugged was implemented and evaluated.
- A long-term effect of Unplugged was detected among program participants with higher levels of self-efficacy who were able to maintain higher level of satisfaction with their health and themselves.

Risks and success conditions for the French sanitary service of health students

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Background:

French sanitary service of health students was a pledge of the French Presidency. It is mainly presented as a massive information campaign on good practices in health made by "thousands of health students going into the enterprises and schools". We tried to skip this orientation and to go to actions in favor of people's empowerment and ability in health choices.

Objectives:

Our program was designed to change students' ideas on prevention, by focusing on reflexivity, motivational approaches, education and ethic in health promotion, of peer-to-peer effects and concrete use of educational tools for teen-agers groups. We developed students' autonomy and ability to negotiate their project with the prevention structures. Training was 11 workshops (2 hours each), of 15 to 20 students (mixing medical, pharmaceutical, dental and midwives), and e-learning. Then they had 5 months to negotiate with their place of intervention (secondary schools and apprenticeship centers) and create their own new project. Intervention lasted for one week, full time, in various teen-agers settings, so that to reduce social and territorial inequities in health.

Results:

After a first test (28 students in 6 settings), 250 students acted in 72 teen-agers' facilities. Problem occurs in 1 case (lack of negotiation and preparation before the intervention) and satisfaction of both students and facilities are high. At the same times, we had to face constraints due to double bind policies of the state authorities (i.e. as asking for more training time and reducing training financing, asking to send students in deprived or isolated areas and reimbursing scarcely the costs).

Conclusions:

An educational program on training and students' autonomy works if we take care on five points: learning of educational process in health, control of peer-to-peer effects, reduction of health inequities, and reinforcement of local health promotion policies. This also needs state policies that are ready to play the game.

Key messages:

- Training of health students to develop their autonomy and ability in health education works.
- Inconsistency in State policies is the major problem.

The trends in health behaviour of the first-year students from Kaunas universities, 2000 - 2017

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Background:

First-year university students are exposed to different factors affecting their lifestyle. The aim of the study was to evaluate the trends in health behaviour of first-year students from four Kaunas universities over 17 years.

Methods:

The study was carried out in 2000, 2010 and 2017. In total, 689, 739 and 1062 randomly selected first-year students participated (response rates >90%). During the lectures, participants filled in the anonymous questionnaire that included information on nutrition, physical activity, harmful habits, height, and weight.

Results:

The reduction in daily smoking was observed: from 30.2% in 2000 to 18.4% in 2017 among males and from 21.1% to 15.9% among females, respectively. The proportion of male students drinking alcohol at least once a week declined from 62.7% in 2000 to 31.6% in 2017 and the proportion of females - from 41.5% to 27.3%, respectively. There was an increase in the proportion of students who have tried or are taking drugs: from 15.9% in 2000 to 27.8% in 2017 among males and from 4.8% to 18.8% among females, respectively. The changes in the nutrition habits of the students were observed: the proportion of students who consumed red meat every day decreased (up to 35.6% in 2017). In 2017, more students consumed cereals, fresh fruits and vegetables every day and fewer sweets, confectionery and soft drinks at least once a week than in 2000. There was a decline in meantime students spent sitting as well as in the average duration of the sleep. The proportion of students who take part in sports activities has increased by 17.1%. However, the prevalence of overweight and obesity increased from 11.7% in 2000 to 23.7% in 2017 among males, and from 4.2% to 9.0% among females, respectively.

Conclusions:

Over 17 years, most health behaviours of the first-year students have changed in a positive direction; however, some unhealthy habits are still common and the prevalence of overweight has increased.

Key messages:

- This study highlights the importance of implementing preventive programmes among students after starting university.
- Monitoring of changes in health behaviour of students helps timely respond to the challenges.

Perception of Social Gender Roles in Medical Faculty Students

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Background:

‘‘Gender equality’’ is the fifth of the Sustainable Development Goals put forward in order to ensure the development in all areas. Medical faculty students, who will be a doctor, should practice with a gender equality perspective and shape their views and attitudes with equality in mind which will have an important part in the adoption of equality by society. The aim of the study was to evaluate the perception of social gender roles in medical students.

Methods:

This cross - sectional study was performed with all students in Eskisehir Osmangazi University Faculty of Medicine. The questionnaire includes sociodemographic characteristics and Gender of Perception Scale(PCS) to measure perception of social gender roles. The scores that can be taken from the scale are ranged from 25 to 125, and high scores indicate that perception of gender is positive and equality. Mann Whitney U, Kruskal Wallis were used in univariate analysis; multivariate linear regression was used in multivariate analysis.

Results:

The study group consisted of 1023 (84.3%) students in the study group, 52.8% were females and their ages ranged from 17 to 30 and the mean was 21.36 ± 2.06. The PCS scores ranged from 32 to 125 and the mean was 108.07±16.58. Multivariate linear regression analyzes were performed to determine the factors associated with the PCS. According to the results of last model sex, living with grandparents until the age of 18, region of the majority of life and parental attitudes were found to be related to perception of social gender roles ($F = 29.602$, $R2 = 0.170$, $p < 0.001$).

Conclusions:

The perception of gender of medical students was found to be positive. Sex and the characteristics of the social environment were related to perception of gender. In order to raise awareness on gender equality, it might be useful to ensure integration in the medical education curriculum.

Key messages:

- Factors that can be changed, such as the social characteristics of the living environment, were found to be related to perception of social gender roles.
- Ensuring gender equality, one of the Sustainable Development Goals, is important for medical students who will be a role model for society.

School connectedness and adult depressiveness, longitudinal study of the Northern Swedish Cohort

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Background:

The aim of this study was to use Bronfenbrenner’s ecological theory to investigate adolescents’ school connectedness and family climate as potential predictors of depressiveness in adulthood. **Methods:** The data are from the Northern Swedish Cohort and the sample consists of 481 women and 526 men born 1965 that participated in data collection at four time points, at age 16, 21, 30 and 43. Multivariate linear regression was used to examine the associations between school connectedness and family climate and depressiveness, respectively.

Results:

Poor school connectedness was found to be associated with depressiveness up to mid adulthood and social/material adversities in adolescence were found to expand this association in young adulthood. **Conclusions:** This study show that poor school connectedness can have long lasting effects on mental health. Thus, mental health promoting initiatives with holistic approach aiming at enhancing both sense of belonging in school, peer relations and academic achievements are needed. The study accentuates the complex processes determining mental health and propose a theoretical approach appealing for public mental health research. To advance the knowledge of the mechanisms behind the associations between proximal processes and depressiveness in adulthood, additional life-course studies are called for.

Key messages:

- Poor school connectedness can have long lasting effects on mental health.
- Initiatives aiming at enhancing both sense of belonging in school, peer relations and academic achievements are needed.

3.S. Chronic disease and burden

An ordinary life with chronic condition as a goal for medicine

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Background:

Social sciences and humanities have developed a significant interest about chronic condition since the 1960, examining the ‘‘biographical disruptions’’ it seems to entail and the coping capacities of individuals. The present study, funded by IreSP, aims at developing a new conceptual and normative perspective: to explore the idea of ‘‘normal’’ life with chronic condition. This perspective allows for taking into account the expression of the wish for a ‘‘normal life’’ actually expressed by persons with chronic condition. On the basis of this research perspective, the present study aims at assessing the possibility to live such a life with chronic condition as a goal for the health care systems. As it may have substantial implications in terms of health care organisation and orientation, this research is important to ground public health policies.

Methods:

1.Review of literature (philosophy of the forms of life and of ordinary life, social sciences' critical assessment of the ''injunction to normality'', ethnographic works on the expression of the whish for a normal life)

2.Analysis of the theoretical and ethical resources of the philosophical works by G. Canguilhem and K. Goldstein

Results:

-Elaboration of a philosophical conceptual and normative frame based on the notion of ''ordinary life'' and of a ''reinvented normality''

-Attention paid to the ''milieu'' of life of the person and its adjustment to her capacities.

-Identification of the technological tools and care practices contributing to such a reinvention.

Conclusions:

The study presents the conceptual and normative results of a philosophical analysis careful of the challenge raised by the wish for a ''normal life'' expressed by people with chronic condition. It proposes some conceptual and normative tools to answer this challenge. It formulates this challenge as an issue for the health care systems and the organisation of medical care, its places (institutions of various types and/or home) and its goals.

Key messages:

- The wish for a ''normal life'', ''a life like everyone's life expressed by persons with chronic condition should by taken into account by the health care system.
- Philosophy offers some conceptual and normative tools to medical care to answer this wish.

Education and T2DM: the role of differential exposure and susceptibility to overweight and obesity

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Background:

There is a clear educational gradient in type 2 diabetes and differential exposure and susceptibility to overweight and obesity across educational groups may explain part of this gradient. Previous studies have mainly addressed differential exposure to overweight/obesity, even though the pathways are highly intertwined. We take advantage of novel methodological developments to assess the simultaneous contribution of both pathways. We further compare these analyses to more traditional approaches.

Methods:

A prospective cohort of 53,159 Danish men and women, aged 50-64 years at enrollment in 1993-1997, were followed for a mean of 14.7 years. We used national register data to ascertain education and incident type 2 diabetes. Overweight/obesity was determined by BMI. Using a marginal structural approach and a three-way effect decomposition, we estimated rate differences of type 2 diabetes by education and decomposed these into direct, indirect and mediated interactive proportions. We compared this approach to traditional and separate approaches to mediation and interaction analysis.

Results:

Compared with high education, medium education was associated with 316 (95% CI: 268-363) extra cases of type 2 diabetes per 100,000 person-years, and low education with 454 (95% CI: 398-510) extra cases. Differential exposure to overweight/obesity accounted for 29% (95% CI: 24-36) and 37% (95% CI: 31-45) of the cases in the medium and low educational levels, respectively, while differential susceptibility accounted for 6% (95% CI: 3-10) and 9% (95%CI 4-14). Traditional approaches suggested stronger effects of both pathways.

Conclusions:

Differential exposure and susceptibility to overweight/obesity are both important pathways in the education-type 2 diabetes association, and the results emphasize the importance of addressing them simultaneously.

Key messages:

- Lower educated groups are more exposed and susceptible to the adverse effects of overweight/obesity with regard to type 2 diabetes, suggesting a large preventive potential.
- Future studies could benefit from estimating both differential exposure and differential susceptibility to better understand social inequality in type 2 diabetes and other health outcomes.

Machine learning application to the reduction of ambulatory care sensitive admissions (ACSA)

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Background:

Reducing Ambulatory Care Sensitive Admissions (ACSA) not only enhances patients' quality of life but could also save substantial costs. ACSA are avoidable admissions for chronic conditions that are associated with socio-economic status, health status, utilization and readiness of primary care service as well as environmental factors. Undoubtedly, health authorities are highly interested in enhancing the health care services in order to reduce the number of ACSA. The objective is to identify the geographic areas where the primary care workforce should be increased in order to maximize the decrease in ACSA.

Methods:

Using ambulatory care and inpatient claims data as well as contextual variables, we apply support vector machine regression (SVR) to select the geographic areas (fr. Bassins de vie - BVs) and the number of to-be-added primary care nurses that maximize the ACSA reduction. We also take into account the constraints related to budget and the equality of health care access. Particularly, there are three possible constraints: (1) the total number of nurses can be added in the whole region; (2) the maximum number of the nurses can be added at each area; (3) the maximum density of nurses (numbers of the nurses per 10,000 habitants) can be reached at each area. The results are visualized using spatial maps.

Preliminary results:

In 2014, 27,000 ACSA occurred in the Occitanie, France region. For a specific set of constraints values, the model identified 16 BVs (out of 201) where the addition of 30 nurses could lead to the maximum ACSA reduction in number which is 17.

Conclusions:

In the French Occitanie region, our SVR model was able to target a small number of geographic areas to maximize the impact of increased primary care workforce on ACSA. Our approach is applied to a single region, and it can be applied to other regions or extended at the national level as well as to other countries.

Key messages:

- A decision support tool to help health authorities in locating primary health care resources for the maximum reduction of ambulatory care sensitive admissions.
- An application of machine learning in primary care services.

Presence of intimate family and cancer screening behavior: a cross-sectional study of 4237 workers

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Background:

Presence of intimate family is considered as one of the related factors of health behaviors. The study aim was to clarify the relationship between the presence of significant others and having a colorectal cancer screening.

Methods:

This study used data of baseline survey of intervention study regarding breast cancer screening at worksites. A total of 6827 workers, aged 40 and over of the retail company, were required to fill out a self-administrated questionnaire related to cancer screening. the intimate family was defined as a person's spouse or partner and children. Logistic regression analyses were performed to estimate odds ratios [ORs] and 95% confidence intervals [CIs] of undergoing an annual screening for colorectal cancer by the presence of spouse or partner adjusting for age. The same analysis was performed regarding the presence of children.

Results:

Response rates were 70% in men and 71% in women. After excluding participants with a past history of cancer and lack of information about colorectal cancer screening or the presence of significant others, 4203 remained for the analyses. A total of 1777 participants reported that they had undergone screening for colorectal cancer within a year (42% in men and 42% in women). Screening rates of participants with/without a spouse were 45% and 30% in men, 44% and 38% in women. Screening rates of participants with/without children were 45% and 33% in men, 43% and 38% in women. ORs of undergoing annual colorectal cancer screening by the presence of spouse were 1.8 (1.3-2.5) in men and 1.3 (1.1-1.5) in women. ORs by the presence of children were 1.6 (1.2-2.1) in men and 1.1 (0.9-1.3) in women.

Conclusions:

This study indicated that health behavior in cancer screening could be affected by having a spouse in both men and women. The presence of children positively related in men. Male workers with children might be under some pressure to keep their health, from a sense of responsibility of main income earner.

Key messages:

- Health behavior in cancer screening could be affected by having a spouse.
- Health behavior in cancer screening could be affected by having a child only in men.

The status of compliance with guidelines of cancer screening in Japan

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Background:

The Ministry of Health, Labour and Welfare (MHLW) establishes screening recommendations specifying screening methods, age, and interval for gastric, colon, lung, breast, and cervical cancers. Screening programs are provided via local healthcare departments (LHD), who are responsible for managing programs and reporting the screening status through a survey annually.

Methods:

We analyzed screening status provided by LHDs in fiscal 2017 in regards to appropriate screening age and interval. Briefly, current recommended screening age by MHLW is followed: colon, lung, breast cancer screening are age 40 years and older, and cervical cancer for aged 20 and older, and gastric cancer for aged 50 and older. Screening intervals are gastric, breast, and cervical cancer screening are two years, and colon and lung cancer screening are one year.

Results:

The survey was completed by 1736 LHD (response rate: 99.9%). Regarding age-appropriate compliance, in cervical cancer, 96.4% of LHDs reported following recommended target age, while compliance was lower for lung, colon, breast, and gastric cancers at 79.4%, 75.7%, 60.2% and 4.2%, respectively. High compliance with recommendations for screening interval was identified for colon (99.7%) and lung (98.7%) cancers; this was substantially less for breast, cervical, and gastric cancer screening at 39.8%, 34.1%, and 4.6%, respectively.

Conclusions:

In 2016, MLHW changed the starting screening age for gastric cancer from 40 to 50 years old, likely resulting in the lowest compliance in our analysis. Though it may take time for screening facilities to come into compliance with newer recommendations. Many LHDs provide screening without adhering to recommended starting ages, with a general tendency to provide screening at younger than recommended ages. This is a barrier to maximizing effectiveness and minimize harms of screening and warrants closer monitoring to promote efficiency in cancer screening programs.

Key messages:

- There is relatively low compliance with cancer screening guidelines in Japan.
- Establishing an environment of appropriate monitoring and support to achieve the goal of cancer screening is warranted.

Patients' participation in the colorectal cancer screening program and their health beliefs

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Background:

Both morbidity and mortality rates from colorectal cancer (CRC) have been increasing in Lithuania. However, only about 50% of the target Lithuanian population was involved in CRC screening in 2018. The aim of this study was to evaluate associations between the involvement of 50- to 74-year-old primary care patients in CRC screening and their health beliefs as well as awareness about this screening.

Methods:

A cross-sectional study was conducted in September-November 2016. A total of 390 patients aged 50-74 years were anonymously surveyed at 10 primary health care institutions of Šakiai region, Lithuania. The response rate was 86.7%. Chi-square and z tests were used to determine a relationship between two nominal (categorical) variables ($\alpha = 0.05$).

Results:

43.1% of the respondents noted about their participation in the CRC screening program. Those who had participated in the program more often ($p < 0.05$) than nonparticipants reported to be worried about getting CRC (60.6% vs 43%) and thought that this could happen already in the next year (16.8% vs 6.5%), more frequently believed that the possibility of getting CRC for them was very high (74.8% vs 60.9%), that they had predisposition to CRC (44.9% vs 27.6%) and that CRC screening will prevent them from problems in the future (97.4% vs 90.9%). The participants of the CRC screening program also more frequently ($p < 0.05$) than nonparticipants noted that they had heard about this program before their involvement in it (98.8% vs 70.9%) and got this information from their family doctor 2.1 times more frequently (88.1% vs 41.4%). Nearly half (47.3%) of the program participants and 30.6% of the nonparticipants mentioned that the responsibility for participation in the CRC screening program should be taken by patients themselves ($p < 0.05$).

Conclusions:

Participation of patients in the CRC screening program is related to their health beliefs, awareness and active engagement of family doctors in CRC screening programs.

Key messages:

- The patients who had participated in the CRC screening program had more negative health beliefs regarding CRC and were better informed on the program by their family doctor than nonparticipants.
- Family doctors should pay more attention to informing patients about CRC and its prevention.

Standardization of the Cancer Health Literacy Test – 6 in a non-cancer populations

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Background:

The Cancer Health Literacy Test-6 (CHLT-6) was originally developed in a cancer population to identify persons with limited cancer health literacy (LCHL). There is no instrument to identify individuals with LCHL in non-cancer populations such as caregivers and epidemiologic samples. This study aims to test if the CHLT-6 can be used to identify persons with LCHL in non-cancer patient populations. The CHLT-6 was administered using a hand-held touch-screen computer.

Methods:

A patient sample of 512 persons was used to test the CHLT-6 measurement structure and externally validate the test. English speaking, aged 18 or higher, and no history of cancer diagnosis were used as eligibility criteria. Participants were recruited from health fair grounds, primary care clinics, and community centers in the Mid-Atlantic region of the U.S.A. Consistent with the analysis of the developmental sample, discrete latent variable modeling was used as the underlying measurement structure of the instrument.

Results:

Two classes were clearly separated by the CHLT-6 items. Measurement invariance tests showed equivalence of conditional probabilities between gender, race/ethnicity, and educational groups. There were significant group differences in prevalence of LCHL. The CHLT-6 was externally validated using race/ethnicity, education, and income. Overall results were very similar to those reported in the cancer population.

Conclusions:

The CHLT-6 is the first and only instrument to identify individuals with LCHL using a discrete latent variable framework. Measurement invariance tests provided empirical evidence that labels used to describe latent classes (i.e., limited and adequate cancer health literacy) have the same meaning between gender, race/ethnicity, and educational groups. Persons self-described as African Americans and low educational attainments have a high probability of belonging to the LCHL class.

Key messages:

- There is a strong support for psychometric properties of the CHLT-6 in a cross-validation sample.
- This study provides empirical basis for using the CHLT-6 in non-cancer populations.

Comparison of Cardiovascular Disease Risks of Actual and Perceptions of Men's that 40-65 Years Old

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Background:

Turkey is among the top countries in Europe in coronary mortality in the 45-74 age range. The highest death due to disorders of the circulatory system (50.8%) that is Amasya province.

Objective:

Determine related factors and to compare with actual and perceived cardiovascular disease (CVD) risks of men aged 40-65 living in Amasya.

Methods:

The sample size of cross-sectional and analytical study consisted of 400 people who met the inclusion criteria. Actual CVD risks of men were calculated using HeartScore. Age, systolic blood pressure, total cholesterol measured by blood taken from the capillary and smoking status were used to calculate CVD risk. Actual CVD risk in next decade has been calculated as low, medium, high or very high. Perceived CVD risk in next decade were identified by participants as low, medium, high and very high responses. They also questioned why evaluation of perceived risk.

Results:

It was determined whereas 8.3% of the males had high, 52.5% had a very high level of CVD risk. The main variables affecting actual CVD risk; diastolic blood pressure, BMI and physical activity. 13.3% of males perceived CVD risks at high and 8% at very high. The main variables affecting perceived CVD risk; age and DM. It was found that 48% and 23.8% of males perceived CVD risks lower and higher than actual CVD risk while 28.2% were accurate. Those who perceived CVD risk at a moderate, high and very high think that this is caused by diseases that increase the risk of CVD and smoking.

Conclusions:

Approximately 1/2 men has very high risk of CVD. It was determined that 1/2 men perceived risks are lower with false optimism and couldn't accurately identify risks of people older and with diabetes.

Key messages:

- It can be ensured that develop risk reducing behaviors and individuals with high risk of CVD can raise their awareness.
- The risk perceptions of males in the very high-risk group from the past to the present are important because they affect their actual risks and risk-reducing behaviors.

Increased risk of Roma for 10-year development of CVDs based on Framingham Risk Score calculation

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Background:
Increased mortality and short life expectancy of Roma are well known epidemiological findings which can be partially explained by the high prevalence of cardiovascular risk factors among them. This study assesses the prevalence of the cardiovascular disease (CVD) risk factors (age, sex, systolic blood pressure, smoking and diabetes status, elevated total and reduced high density lipoprotein cholesterol level (HDL-C)) and the estimation of 10-year risk of development of CVD (CVD in general, coronary heart disease (CHD), myocardial infarction (MI) and stroke) and that of death from CHD and CVD based on the Framingham Risk Score (FRS) in case of the Hungarian general (HG) and Roma (HR) populations.

Methods:
A complex health survey incl. questionnaire based interview, physical examination and laboratory test was carried out in 2018 on the HG and HR populations. The prevalence of different cardiovascular risk factors was defined and FRS was computed and compared between the HG (n = 378) and HR (n = 386) populations.

Results:
The prevalence of diabetes was significantly higher among Roma females compared to females of general population (17.8% vs. 7.7%; p = 0.001) while the average systolic blood pressure level was less elevated among Roma males (127.9 mmHg vs. 129.4 mmHg; p = 0.020). The prevalence of smoking (males: 63.1% vs. 33.7%; females: 67.6% vs. 31%; $p < 0.001$) and reduced HDL-C level (males: 40% vs. 25.9%, p = 0.014; females: 55.5% vs. 35.1%, $p < 0.001$) were significantly higher in both sexes among Roma. The 10-year estimated risk for development of CHD, MI and CVD and the death from CHD was significantly ($P < 0.05$) higher in both sexes among Roma compared to the general population while the average risk scores for stroke and death from CVD were significantly higher only among Roma men.

Conclusions:
Our results show that both sexes in the Roma population have a significantly higher risk for 10-year development of CVD compared to the Hungarian general population.

Key messages:
- The Roma population have a significantly higher risk for 10-year development of cardiovascular diseases and death from them based on the Framingham Risk Score.
- The targeted cardiovascular interventions should be focus on reduce smoking and provide information on the recognition and treatment of diabetes and lipid disorders among Roma.

Economic burden of diabetes in France between 2012 and 2017 based on French national claim database

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Background:
The aim of this study is to assess the economic burden of diabetes in France based on a top-down allocation of health care expenditure, and to analyze structure and trends of expenditure between 2012 and 2017.

Methods:
Using information about 57 millions of individuals from the general scheme insurance database (87% of the French population), we applied algorithms based on ICD-10 diagnoses, long-term diseases, and specific treatments. All reimbursed expenditure (drugs, medical visit and other ambulatory care, hospitalization, disability/sickness benefits) were extracted for each individual. A top-down method was used to allocate expenditure to diabetes. To analyze trends, we applied the same methodology from 2012 through 2017.

Results:
In 2016 (results for 2017 will be available for the conference), among the 137 billion euros reimbursed, 6.8 billion (5%) were attributed to diabetes and 3.2 million people were concerned (5.5% of the population). Drugs represented the main expenditure item (31% of the average annual expenditure per patient related to diabetes), followed by nursing (18%) and medical devices (17.5%). From 2012 to 2016, the number of people with diabetes increased by 11.4% (+322 700) with an increase by 2.7%/year, the expenditure attributed to diabetes increased by 2.3%/year. The average expenditure per patient in 2016 was about €2150, slightly decreasing from 2012, mainly due to price controls on antidiabetics drugs which permits to limit expenditure growth.

Conclusions:
Our study shows the high economic burden of diabetes in France with a detailed analysis of expenditures and their main drivers. With the arrival of innovation and predicted increase of the number of patients partly related to ageing process, control of expenditure must be a priority. The developed tool will help decision makers to monitor the burden of diabetes but also to provide stakeholders with a better understanding of trends and regulating actions.

Key messages:
- Diabetes represents a high proportion of healthcare expenditure in France.
- With the arrival of innovation and predicted increase of the number of patients partly related to ageing process, control of expenditure must be a priority.

Economic burden of cardiovascular diseases from 2012 to 2017 based on French national claim database

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Background:
The purpose of this study was to assess the economic burden of cardiovascular diseases (CVDs) in France by analysing the structure and the growth of expenditure attributed to these diseases between 2012 and 2017.

Methods:
For each year, 11 CVDs were identified from SNDS data using algorithms based on long-term disease registry and hospitalization diagnoses, applied to the population of national health insurance general scheme beneficiaries. The individuals' expenditure (26 different items) reimbursed for hospitalisations, ambulatory care and cash payments were included. A top-down method was used to attribute expenditure to each considered groups of diseases based on the average expenditure by disease calculated for individuals with only one disease. To analyse trends, we applied the same methodology from 2012 to 2017.

Results:
In 2017, of the €140.1 billion reimbursed, €14.0 billion (10.0%) were attributed to the care of 4.0 million people with a CVD (7.0% of the population). Short-stay hospitalisations accounted for 33% of this total expenditure. This proportion was higher for acute CVD (coronary syndrome: 64%, stroke: 56%, heart failure: 65%, pulmonary embolism: 69%) but also for valvular heart disease (50.0%). Medications represented almost 13% of the expenditure attributed to all CVDs, and up to 25% for chronic coronary heart disease. Disability pension essentially concerned sequelae of stroke (12% of the expenditure attributed to this disease). Between 2012 and 2017, the total expenditure attributed to CVDs increased by 3.3% per year, mainly due to the annual mean increase of the number of patients over the period (+3.1%).

Conclusions:
These results demonstrate the high economic burden of CVDs in France with a detailed analysis of expenditures and their main drivers. The developed tool will help decision makers to monitor the burden of these diseases but also to provide stake holders with a better understanding of trends and regulating actions.

Key messages:
- Economic burden of CVD in France is high: 10% of healthcare expenditure.
- Implementation of public health policy to prevent CVD and control risk factors must be a priority.

4.R. Infectious diseases control between policy and epidemiology

Tuberculosis screening for foreign students change: good saving and bad idea?

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Issue:

There was a mandatory screening of tuberculosis (TB) for the 60.000 foreign students (out of European Union) annually newcomer in France. It was organized by screening centers of the Office of Immigration and Integration, a State agency. There was a link with university students' health services (USHS) by systematic exchange of data, and sometimes the USHS was in charge of this screening and financed for that. In March 2016, a law, applied since January 2017, stopped this obligation, and transferred the responsibility of a ''preventive survey'' to USHS, without any means and financing.

Problem:

As the decision was made without any data, thanks to the national network of UHSH, we made a brief national survey showing a 2,7 to 7,9/1.000 incidence, from year to year, 40% being active. About 50% of the cases came from North Africa and China. These data did not changed the decision, and we present its consequences in one French University, which was a previous TBI screening center. We computed all the cases of TB known in our USHS, since 2010, completed by the data form health authorities.

Results:

Since screening is not anymore mandatory we faced a global refusal from Chinese and Moroccan students arguing that there was no TB in their country. Number of foreign students and their origin were approximately stable from 2010 to 2016, and mean TB incidence was 1,97/1.000. Students from China and North Africa represented half of the cases and 40% were latent TB. Since January 2017, TB incidence lowers to 1,51/1.000. Latent TB represent less than ¼, and there was no more cases screened from North Africa and China, while there was no change in foreign students origins, showing a significant degradation of screening effectiveness.

Lessons:

The main reason for screening cessation was to save public money. Due to important lack of knowledge among French state authorities, we couldn't change a decision which threatens the TB epidemic control.

Key messages:
- Cost saving policy reduced the effectiveness of tuberculosis screening.
- Health policy decisions may not take into account epidemiologic objectives.

Healthcare workers and measles outbreaks in Italy: is it time to act? A systematic review

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Background:

Despite healthcare workers (HCWs) vaccination against measles is strongly recommended in Europe, many studies showed their low vaccination coverage and a significant involvement in hospital and community outbreaks. The aim of this systematic review was to analyze the available evidence on HCW role in measles outbreaks and identify the epidemiological characteristics of the transmission patterns related to HCW infection.

Methods:

PubMed, Scopus and ISI Web of Science were searched to detect the measles outbreaks occurred in Italy and involving at least one HCW. English or Italian records were considered eligible. The quality assessment was performed using the ORION checklist. We also analyzed national or regional measles reports and the Measles outbreaks reporting forms that are annually submitted to the World Health Organization (WHO) of the period 2014-2018.

Results:

Twenty-one articles were identified in the literature search and were in general of good quality. Of these, six were regional or Italian reports, two referred to one city, 13 were single outbreak reports. The national data showed that the number of infected HCWs increases with the rise of the total number of cases. A total of 72 descriptions of measles outbreaks were retrieved from the WHO reports. The vast majority was confined to the hospital or started at the hospital and spread in the community. The index cases were mainly patients seeking care for measles-related symptoms but, in the last years, a growing number of infected HCWs was identified as infection source. Similarly, the number of outbreaks with more than one infected HCW recorded a small increase over time.

Conclusions:

HCWs play a critical role in measles transmission especially in hospital outbreaks, which are significantly costly and disruptive for the healthcare delivery quality and safety. Vaccination policy aiming at increasing their immunization rate is crucial to limit the virus spread and the economic impact on the institutions.

Key messages:
- In spite of the remarkable progress, measles elimination in Italy is far from being met and the virus transmission in healthcare settings is increasingly notified.
- Vaccination policies aiming at increasing HCW immunization coverages are essential.

Monitoring measles outbreaks using emergency department data in France

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Background:

Measles' outbreaks still occur in industrialised countries and reactive monitoring of the disease is needed. In France, measles' monitoring is based on a mandatory notification (MN).

Methods:

In France, for each emergency department (ED) visit, an Electronic ED Abstract (EEDA) is transmitted to the OSCOUR® network included in national Syndromic Surveillance System. EEDA include the diagnosis at discharge using International Classification of Disease (ICD-10). This study aims to evaluate the correlation between the number of measles MN and the number of ED visits related to measles and to calculate the positive predictive value (PPV) of diagnosis at discharge of measles in ED. The study period covered the third wave of the 2008-2011 French outbreak. From 2010 to 2011, we analyzed EEDA transmitted from 32/53 ED of the PACA region and regional measles MN. Using weekly aggregated data, the correlation between the number of measles cases given by both MN and ED sources was assessed (Pearson coefficient). In the 4 ED (2 pediatric) of the teaching hospital of Marseille, electronic medical files coded as measles were reviewed to evaluate the PPV of the diagnosis coded according to the national MN case definition (gold standard).

Results:

2,949 MN were transmitted and 1,306/1.3 million visits in ED were coded as measles. The peak of the outbreak was reported the same week by EEDA and MN. The correlation between EEDA and MN was strong (0.91; $p < 0.001$). Hospitalization rate was 20.7% and 21.0% according to EEDA and MN ($p = 0.81$). Among 363 medical files coded as measles in the 4 ED, 14 cases (3.9%) did not fulfilled the national case definition (PPV: 96.1 [IC95%: 94.2-98.1]), 86 (23.7%) fulfilled criteria for "clinical case" and 263 (72.5%) for "confirmed case".

Conclusions:

Most of the time, ED visits coded as measles fulfilled diagnosis criteria. Our results suggested that EEDA (better reactivity) could be complementary to MN (better completeness) to monitor measles.

Key messages:

- Most of the time, ED visits coded as measles fulfilled diagnosis criteria: PPV of coded medical diagnosis in ED for measles is high.
- Reactivity of ED data monitoring could usefully complete mandatory notification for measles surveillance.

Assessement of the influenza burden in nursing homes during two influenza seasons

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Influenza is a significant cause of morbidity and mortality in elderly. They are at high risk of complications after influenza virus infection. Data on the epidemiology of influenza within nursing homes (NH) are limited. The purpose of this prospective study was to better describe the burden of influenza among residents of NH of canton of Vaud, Switzerland, with influenza-like illness during 2016-2017 and 2017-2018 influenza seasons. First, we determined the proportion of influenza-like illness due to influenza in NH residents. We specifically assessed the impact of a positive influenza PCR on clinical features, morbidity and mortality, 30 and 90 days after diagnosis, as compared to a negative influenza PCR. Moreover, influenza vaccination rates of the residents and the healthcare workers within each nursing home were assessed at the end of each influenza season. A PCR test was performed on 509 residents from 61 NH. 227 influenza virus infections were diagnosed; 181 influenza A and 46 influenza B. Compared to residents without influenza virus infection (IVI), residents with IVI were more often feverish with a high fever (69.1% and 88.5% respectively, $p < 0.0001$) are significantly more frequently hospitalized within 30 days after diagnosis (17.6% vs 7.1%, $p = 0.0003$). Any cause mortality at 30 days was similar in both groups (12.8% vs 10.6%, $p = 0.48$). Only 18.1% of IVI residents were treated with an antiviral and 60.4% of them received antibiotics. Influenza vaccination rates of the healthcare workers and residents were respectively 50% and 82%. During influenza season, the feverish residents should be suspected to have influenza virus infection. Residents should be diagnosed (PCR) and treated with an antiviral where appropriate to limit the risk of hospitalization. Healthcare workers should be encouraged to be vaccinated against influenza in order to acquire a better herd immunity within the NH which will limit the spread of influenza.

Key messages:

- Influenza virus in nursing homes is not treated enough.
- Influenza virus infection in nursing homes causes a high number of hospitalizations.

Characteristics of hospitalizations with influenza diagnosis, France, 2012-2017

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Background:

Seasonal influenza surveillance in France is based on several data sources (ambulatory data, emergency department and intensive care unit (ICU) admissions, laboratory data, mortality). However, the data do not provide a complete measure of the impact of the epidemics on the hospital system. The objective of the study was to describe the characteristics of influenza hospitalizations from the French national hospital discharge database (PMSI) between 2012 and 2017 and to precise the burden of influenza by age group and by season.

Methods:

All hospitalizations in metropolitan France with at least one ICD-10 code related to influenza (J09, J10, J11) as a principal, related or associated diagnosis between 1 July 2012 to 30 June 2017 were extracted from the PMSI. For each season, the total number of hospitalizations, admissions to ICU, incidence and lethality rates, lengths of stay and classification in diagnosis-related groups were described by age group.

Results:

During the 5 seasons, 91 255 hospitalizations with an influenza-diagnosis were identified. The incidence varied significantly between seasons, from 12.7/100 000 in 2013-2014 to 45.9/100 000 in 2016-2017. A high number of cases was observed in elderlies in 2014-2015 and 2016-2017, marked by the circulation of A (H3N2) virus. The proportion of hospitalizations with an admission in ICU was 10%, and was higher in the 40-79 age group (19%). Lethality increased steadily with age, from 0.5% under 20 years to 10% in 80 years and older. Length of stay also increased with age. Significant regional disparities were observed, with higher incidence rates in South-Eastern France each season.

Conclusions:

The analysis of influenza hospitalizations from the PMSI provides important elements on influenza burden, not available in the current surveillance systems. An annual analysis, stratified by age group, would provide an indicator of the impact of the epidemics on hospital system at the end of each influenza season.

Key messages:

- Important influenza incidence variations were observed between seasons by age groups.
- Severity and impact of influenza (mortality, ICU, length of stay) varied significantly by age group.

Epidemiology of pertussis in Tunisia; results of five years 2013-2017

Hind Bouguerra

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Background:

Pertussis or whooping cough, is a highly contagious respiratory disease caused by a bacteria gram negative mainly Bordetella pertussis. It is globally endemic despite a high vaccination coverage. In 2014, the World Health Organization estimated the total number of affected persons to 16 million and the number of child deaths reached 190 000. Since 2012, many countries have experienced a resurgence of pertussis including Tunisia. Our objective was to describe the epidemiological situation of pertussis in Tunisia from 2013 to 2017.

Methods:

Our study was a retrospective descriptive study based on data of the surveillance system of Mandatory Reporting Diseases in Tunisia from 2013 to 2017. Data were collected using the declaration standardized forms which included in addition to the socio-demographic data, information regarding vaccination status, date of onset of symptoms and laboratory results (culture and PCR). Data entry was using EpiData and data analysis using SPSS-20.

Results:

During the study period, a total of 252 cases were notified. Males were more affected (55.1%). Age was in average 89 days (3 months). Almost the third were hospitalized in Intensive Care Unit (32.2%). Most cases were reported during 2013 and 2014 (35.7% et 55.5% respectively) and the lethality rate reached 7.2% in 2014. Half cases were notified in the Grand Tunis region. PCR was positive in 74.1% of the cases and bacterial culture was positive in 14.3%, isolating Bortedella pertussis. Vaccination status was mentioned in 70.5% of the cases: it was up-to-date in only 35.7% of the cases and incomplete in 9.8% of the cases.

Conclusions:

Our results showed that pertussis has known a considerable increase the last years, especially in 2013 and 2014. This prompts us to be more vigilant regarding this disease, which has been neglected the last decades. Education of population as well as health professionals is extremely important, particularly the importance of vaccination and preventive measures.

Key messages:

- From 2013 to 2017, number of pertussis cases in Tunisia varied with a considerable increase in 2013 and 2014.
- With the increase of pertussis cases and severity, preventive measures should be taken especially the importance of vaccination.

Prevalence and risk factors of hepatitis B in Tunisia

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Background:

Hepatitis B virus (HBV) infection is a major public health problem. Data related to epidemiology, distributions and outcomes of VHB infections in Tunisia remains scarce. This work aimed to study the prevalence of HBV infections and their distribution as well as the main risk factors associated to HBV infection.

Methods:

Our study was a cross-sectional household- based study carried out among a representative sample of 22 275 from January 2014 to December 2015. Sampling was based on the National Census of 2014. For data collection, questionnaires were administrated by trained investigator and blood samples were sent to the Reference laboratory for analysis of HBV markers.

Results:

Among 21720 surveyed subjects, 19663 subjects had a laboratory tests and the serological results reached to 19155. Overall prevalence of HBs Ag was 1.7% [1.6-1.9]. Prevalence of HBsAg was significantly higher in men (2.1% against 1.4%; $p < 10$-3), in age group more than 20 years (2.1% against 0.1% $p \ll 10$-3) and in the Central region (2.3%; $p < 10$-3). Among the associated risk factors in univariate analysis were chronic dialysis, dental care, surgical intervention, hospitalization, traditional circumcision, scarification and multiple sexual partners. Multivariate analysis showed that male gender, age over 20 years, center and south regions, hospital follow-up of a chronic pathology and having a family member chronic carrier of HBs Ag were the associated risk factors of HBV infection and vaccination was the only protective factor.

Conclusions:

Our study allowed to have a clear estimate of the national prevalence of HBsAg and to classify Tunisia as a country of low endemicity of Hepatitis B. This decline is mainly due to the introduction of vaccination since 1995 and the improvement of the health system. However, more efforts should be paid to reduce nosocomial transmission and traditional high-risk behaviors.

Key messages:

- Tunisia has become a country of low endemicity for hepatitis B.
- This was a result to the introduction of vaccination since 1995.

Human papillomavirus infections and cervical cancer screening in Tunisian women

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Background:

Human papillomavirus (HPV) infections are a significant public health problem with global estimations over 520 000 new cases and 274 000 deaths due to cervical cancer. In Tunisia, cervical cancer is the third cause of cancer in women but only a few prevalence studies conducted in specific populations are available. The present study aims to estimate the national prevalence of HPV infection and cervical cancer testing among Tunisian women.

Methods:

We conducted a population-based cross-sectional study in 2014. We included all sexually active women aged 18 years and older, present in primary health care centers the day of the study. Data collection was based on a standardized questionnaire including socio-demographic data, high-risk behaviors and previous cervical screening. HPV detection and typing was only done for betaglobin positive PCR-test. Ethical considerations were respected.

Results:

The total number of surveyed women was 1494 and the overall prevalence of HPV infection was 7.5% IC95% [5.9%-9.0%]. The most common genotypes were HPV6 (21.9%) and HPV16 (11.5%). Prevalence of high-risk HPV was higher than low-risk HPV; 4.8% IC95% [3.7%-6.2%] and 3.8% IC95% [2.8%-4.8%] respectively. The prevalence of previous cervical screening was 36.6% (95% CI [34.3%-39.2%]). This rate was significantly associated with age ($p < 10$-3); from 13.9% among those <30 years to 49.3% among those $\geq$ 50 years.

Conclusions:

Our survey provides an important overview of the current situation of HPV infection among Tunisian women. National prevalence of HPV infection was 7.5% but only 36.6% of women had a previous cervical cancer screening. This coverage remains poor, thus the need of targeted education and encouraging strategies to reduce cervical cancer burden in Tunisia.

Key messages:

- National prevalence of HPV infection is not negligeable in Tunisia, especially high risk HPV infections.
- Cervical screening is still low among Tunisian women, hence the need for education targeted to this population.

Invasive pneumococcal disease in Latvia seven years after PCV10 introduction

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Background:

In 2009 in Latvia, invasive pneumococcal disease (IPD) became notifiable for physicians and in 2010 vaccination of infants with PCV7 commenced. In 2012 PCV10 vaccination was introduced. The objectives of our study were to evaluate trend of incidence and trend serotype distribution of IPD in Latvia and to investigate factors associated with death from IPD.

Methods:

Laboratory confirmed IPD cases are passively notified to the Centre for Disease Prevention and Control of Latvia by laboratories and clinicians. We calculated incidence by age, sex, case fatality and trend in serotypes.

Results:

From 2012 to 2018, 466 cases of IPD were reported, mean annual incidence 3.4/100,000. The notified incidence remained stable from 2012-2014 (2.7), peaked in 2015 (4.4) and fell to 3.9 in 2018. The highest mean annual IPD incidence was in infants (4.8) and in elderly (6). The highest mean annual incidence was reported in males (4.5) in comparison to females (2.4) (IR-1.8 95%CI 1.6-2.4). Case fatality was 19% (87/466) and 23% (37/162) in cases aged > = 65 years. 90% (421/466) of isolates were serotyped. The proportion of PCV10 vaccine serotypes fell from 50% (20/40) in 2012 to 19% (14/74) in 2018 (chi2 test for trend = 0.000). Since year 2017, PPV23nonPCV13 and Non-vaccine serotypes become more common. We detected PCV13 serotype (RR 2.04 95%CI 1.37-3.02), S.pneumoniae serotype 3 (RR 1. 91 95% CI 1.25-2.93) significantly associated with IPD death.

Conclusions:

Surveillance data indicate evidence of serotype replacement. Surveillance evaluation should asses the representativeness of notification. Furthermore S. pneumoniae carriage study may be useful to characterise serotype circulation. Serotype 3 and age demonstrate independent and significant association with fatal IPD outcome.

Key messages:

- IPD surveillance data analysis indicated evidence of serotype replacement with PPV23nonPCV13, NonVaccine serotypes. Serotype 19A becomes more common with significant increasing trend.
- Serotype 3 and age independently and significantly associated with fatal IPD outcome. S.pneumoniae carriage study would be very useful providing more evidence of characterizing serotypes circulation.

Overview of three-year trends of antimicrobial consumption and resistance in Sicilian hospitals

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Background:

Antimicrobial resistance (AMR) is one of the ten threats identified by the WHO in 2019. In order to face this issue and in the framework of the National Action Plan on Antimicrobial Resistance (PNCAR) 2017-2020, the Sicilian Health Authority has implemented a surveillance system of antibiotic consumption in the hospital sector and in the community and of antibiotic resistance in the Sicilian hospitals. The aim of the present work is to report the results of three-year surveillance.

Methods:

From 2015 to 2017, data on antibiotic consumption have been collected from pharmacies of participating hospitals. AMR data on seven bacterial pathogens isolated in blood and cerebrospinal fluid have been collected from hospital laboratories, using routine clinical antimicrobial susceptibility tests. Antibiotic consumption was expressed as Defined Daily Dose (DDD) per 100 patient-days. Antibiotic resistance rates (RRs) were calculated as the number of non-susceptible isolates divided by the total number of isolates multiplied by 100.

Results:

The most commonly consumed antibiotics in participating hospitals were fluoroquinolones in 2015, penicillins in 2016, and beta-lactams in 2017, respectively. RRs of Klebsiella pneumoniae significantly increased for all antimicrobial classes ($p < 0.001$), but carbapenems. By contrast, RRs of Escherichia coli resistant to third-generation cephalosporins and carbapenems showed significant decreasing trends ($p < 0.001$).

Conclusions:

The implementation of the Sicilian surveillance system provides Sicilian reference data to monitor trends and target interventions and policies for reducing the threat of AMR. Recently, using toolkits of the ECDC-EAAD initiative adapted with regional surveillance data, an educational campaign "Obiettivo Antibiotico" - https://www.obiettivoantibiotico.it/ - was designed and launched to raise awareness of prudent use of antibiotics in the general public and in healthcare professionals in Sicily.

Key messages:

- Inappropriate antimicrobial consumption observed in Sicilian hospitals contributes to the emergence and selection of AMR.
- Surveillance system of antimicrobial consumption and AMR can help identify strategies for preventing spread of multi-drug resistant microorganisms.

Community use of antibiotics and development of bacterial resistance: a case-control study in Italy

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Background:

Antibiotic resistance is now a global emergency. An increasing number of infections are becoming difficult to treat and lead to longer hospitalizations, higher medical costs and increased mortality. The aim of this study is to assess, in a population at low prevalence of use of antibiotics, whether a previous use of these drugs is associated with the occurrence of clinically relevant resistance of E.coli to fluoroquinolones (FQs), one of the most widespread and critical bacteria resistance in Italy.

Methods:

Through a data linkage of databases of the health information systems of the Province of Bolzano (Italy) a case-control study was carried out using 2016 data. All subjects for which the resistance of E. coli to FQs was tested by the regional microbiology reference laboratory were included in the study. Those with a positive FQs-resistant E.coli isolate were defined as cases (n = 409), while the others were considered controls (n = 933). For each subject the total number of prescriptions of any antibiotics and the total number of prescriptions of FQs in the previous year were detected through a record linkage with the drug prescription database. Information on potential confounding factors (age, gender, number of hospital admissions, days of hospitalization, number of surgeries, diagnosis of chronic diseases) were obtained from the database of hospital admissions. Multivariate logistic regression analysis was used to study the association between previous use of antibiotics (any and FQs only) and development of E.coli resistance to FQs.

Results:

It was observed that for each unit increase in the number of prescriptions of any antibiotic, the probability for E.coli to develop FQs resistance significantly rises by 16%. This probability is much higher (45%) if the prescribed antibiotic is a FQ.

Conclusions:

This study confirms the association between previous consumption of antibiotics and the onset of resistance even in an area with a low prevalence of use.

Key messages:

- The results of this study reiterate the need to prescribe and dispense antibiotics only when they are really needed.
- Health information systems allows to study the role of antibiotic use in the development of bacterial resistance, providing useful information for audit interventions among healthcare professionals.

4.S. Health outcomes and social determinants

Changes in disease burden in Poland, 1990-2017: a systematic analysis for the GBD Study 2017

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Background:

In Poland, a comprehensive analysis describing trends in disease burden for major conditions has never been published. The study objective was to use the GBD database to assess disease burden in Poland, evaluate changes in population health between 1990-2017, and compare Poland with other Central European (CE) countries.

Methods:

The results of GBD 2017 for 1990 and 2017 for Poland were used to assess rates and trends in years YLLs, YLDs, DALYs.

Results:

Between 1990 and 2017, age-standardized YLL rates for all causes declined in Poland by 46.0%, YLD rates declined by 4.0%, and DALY rates by 31.7%. Greater relative declines were observed for females regarding YLLs/YLDs. There was a decrease in communicable, maternal, neonatal and nutritional disease DALYs (48.2%); DALYs due to non-communicable diseases (NCDs) decreased 2.0%. In 2017, Poland performed better than CE as a whole (ranked 4th for YLLs, 6th for YLDs and 5th for DALYs) and achieved greater reductions in YLLs and DALYs than most CE countries. In both 2017 and 1990, the leading cause of YLLs and DALYs in Poland was ischemic heart disease (IHD), of YLDs - low back pain. In 2017, the top 20 causes of YLLs and YLDs in Poland and CE were the same, although the order was different. In Poland, age-standardized DALYs from neonatal causes, other cardiovascular and circulatory diseases, and road injuries declined substantially between 1990 and 2017, while alcohol use disorders and chronic liver diseases increased. The highest observed-to-expected ratios (OER) were seen for alcohol use disorders for YLLs, neonatal sepsis for YLDs, and falls for DALYs (3.21, 2.65 and 2.03 respectively).

Conclusions:

Improvement in Health in Poland has been observed since 1990. In 2017 the country outperformed CE as a whole for YLLs, YLDs and DALYs. While the health gap between Poland and Western Europe has diminished, it remains substantial. IHD is still the leading cause of disease burden in Poland, but DALYs from IHD are declining.

Key messages:

- In the light of dramatic shortage/aging of the workforce and low public health expenditure, the observed rise in NCDs and between-gender inequalities pose a challenge for the Polish health-care system.
- To minimize the gap between Poland and Western Europe, an integrated response, which addresses the causes of death and ill-health, particularly those for which rates have increased, is urgently needed.

Daylight saving time and acute myocardial infarction: a meta-analysis

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Background:

The current evidence on the effects of daylight saving time (DST) transitions on major cardiovascular diseases is limited, and available results are conflicting. We carried out the first meta-analysis aimed at evaluating the risk of acute myocardial infarction (AMI) following DST transitions.

Methods:

We searched MedLine and Scopus up to December 31, 2018, with no language restriction, to retrieve cohort or case-control studies evaluating AMI incidence among adults ($\geq$18y) in the week following spring and/or autumn DST shifts versus control periods. A summary relative risk of AMI was computed after: (1) spring, (2) autumn, (3) both transitions considered together versus control weeks. Stratified analyses were performed by gender and age. Data were combined using a generic inverse-variance approach.

Results:

Seven studies (>115,000 subjects) were included in the analyses. A significantly higher risk of AMI (Odds Ratio: 1.03; 95% CI: 1.01-1.06) was observed in the two weeks following spring or winter DST transitions. The risk increase was however significant only after the spring shift (OR: 1.05; 1.02-1.07), while AMI incidence in the week after winter DST transition was comparable to control periods (OR 1.01; 0.98-1.04). No substantial differences by age or gender emerged.

Conclusions:

The risk of AMI increases modestly but significantly following DST transitions, supporting the proposal of DST shifts discontinuation. Additional studies fully adjusting for potential confounders are required to confirm the present findings.

Key messages:

- The risk of acute myocardial infarction increases modestly but significantly following DST transitions.
- Although preliminary, our findings support the proposal of DST shifts discontinuation.

Association of nationality and education with oral health: a screening programme in Northern Italy

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Background:

Socioeconomic status (SES) has been proposed as an important determinant of oral health outcomes. The aim of this project is to assess the association between nationality, parents' educational level and oral health in a sample of children in Udine, Italy.

Methods:

Between February and May 2018, in the context of a screening programme carried out to evaluate the oral health status in 6-year-old children, parents filled out a questionnaire investigating behavioural, socioeconomic and demographical factors. For each child the number of decayed, missing and filled deciduous teeth (dmft) and caries prevalence (CP) were assessed.

Results:

The screening was conducted on 976 children, 705 (72%) Italian (I) and 271 (28%) foreign residents (F). Not-Italian nationality significantly increased the CP (F: 59.32%; I: 32.74%; RR: 1.81 [95% CI: 1.57-2.10]; Risk Difference: 26.59 [95% CI: 19.98-33.19]) and dmft median value (F: 2±5; I:0±1; $p<0.0001$). Stratified by level of education, the differences between I and F were significant when both parents had low educational level (CP: RR = 1.62 [95%; CI: 1.00-2.62]; dmft: F = 5±5; I = 0±3; $p<0.05$) and when both parents had high school education (CP: RR = 1.45 [95%; CI: 1.14-1.84]; dmft: F = 2±6; I = 0±2; $p<0.001$). Otherwise, when both parents had university degree, nationality did not increase significantly the outcome (CP: RR = 1.17 [95%; CI: 0.91-1.50; $p>0.1$]; dmft: F = 0±2; I = 0±0; $p>0.1$).

Conclusions:

The analyses suggest that being a foreign resident is a risk factor for lower child oral health. Moreover, parents' educational level seems to be an effect modifier: when parents had a university degree there was no significant difference between Italians and foreign residents, otherwise the lower the level of education, the greater the difference between the categories. These data may help to identify particularly vulnerable groups and to develop preventive strategies.

Key messages:

- These findings confirmed the presence of a vulnerable population (foreign residents) in which socioeconomic factors had stronger associations to oral health than Italian citizens.
- Further research may be useful to identify both protective and risk factors associated with different nationality, in order to evaluate specific interventions in low-SES groups.

Monitoring inequalities in self-rated health over 36 years among Finnish women and men

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Background:

Health inequalities across countries and populations are well established, but little is known about their long-term trends and even less about factors shaping the trends. We examined the magnitude of absolute and relative educational inequalities in self-rated health over 36 years among adult Finns, considering individual covariates and macro-economic fluctuations.

Methods:

Data were derived from representative annual surveys in 1979-2014 among men and women and covered ages 25-64. Nine periods were used (n = 8870-14235). Our health outcome was less-than-good self-rated health and our socioeconomic indicator was completed years of education as a continuous variable. Nine time-variant sociodemographic and health-related covariates were included. Educational inequalities in self-rated health were examined by relative index of inequality (RII) and slope index of inequality (SII).

Results:

Linear trends suggested stable overall development in both relative and absolute health equalities during 36 years. Period specific analyses showed that among men relative and absolute inequalities narrowed immediately after economic recession in Finland in 1993-94, and among women, inequalities narrowed during global financial crisis in 2008-09. Adjusting for covariates reduced the magnitude of inequalities throughout the nine periods, but affected little the period specific patterning of health inequalities.

Conclusions:

Educational inequalities in self-rated health persisted during 36 years in Finland. While among men and women health inequalities narrowed during and after recessions, they widened soon back to the pre-recession level. The perseverance calls for powerful measures to tackle health inequalities, such as preventing unhealthy behaviours, obesity and unemployment in particular among the lower educated.

Key messages:

- Health inequalities have persisted in Finland over 36 years, with unhealthy behaviors and unemployment affecting their magnitude.
- Health inequalities narrowed during economic recessions, but widened soon back to pre-recession level.

Welfare state impact on mental wellbeing of the oldest old in Europe: A multilevel survey data study

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Background:

Improving the health and wellbeing of the oldest old population is a key public health policy concern considering the rapid aging of the world's population. The purpose of this study was to investigate the impact of the welfare state on different aspects of mental wellbeing of the oldest old population in Europe. Several approaches to measure welfare state types were compared.

Methods:

The study used individual level data from Round 6 of the European Social Survey to measure six dimensions of mental wellbeing among the 80+ population including countries belonging to the European Union or European Economic Area. Welfare state types were measured using one welfare state- and three elderly care regime typologies, as well as three welfare state dimensions based on factor analyses of several welfare state characteristics. Welfare state impact on mental wellbeing was analysed by multilevel regression analyses, controlling for age and gender.

Results:

The preliminary results show that universalistic and service-based regimes, as e.g. Nordic countries, are associated with higher level of subjective wellbeing and social trust, but not psychological wellbeing, compared to family-based regimes with low formal support. East Europe have lower scores on all dimensions compared to Nordic countries. The welfare state dimension capturing prioritisation of health and social services and gender equality is positively associated with all wellbeing aspects, whereas the factors capturing labour market participation of seniors and income equality respectively, are only significantly associated with subjective wellbeing and social trust.

Conclusions:

The result point to caring approaches with high level of formal support and gender equalisation as key to enhance all aspects of mental wellbeing for the oldest old. Stimulating long duration of working life and reducing income inequalities have the potential to increase life satisfaction and happiness and social trust.

Key messages:

- Welfare state matter for the mental wellbeing in the oldest old population.
- General measures, supporting formal care, labour market participation and income and gender equality will also benefit the oldest old.

Changes in mortality inequalities by marital status in Lithuania during 2001-2014

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Introduction:

Health inequalities have emerged as a big issue of public health in Lithuania. Recent studies have demonstrated increasing mortality differentials between marital status groups, occurring mainly due to a decline in mortality of the married populations.

The aim of the study - to determine changes in inequalities in mortality from major causes of death by marital status in Lithuania during 2001-2014.

Methods:

Individual records from population censuses conducted in 2001 and 2011, National Mortality Register (period of 2001-2014), and Population Register (period of 2001-2014) have been linked using personal identification number. Study included those aged 30+. Mortality rates from cardiovascular diseases, cancer, external causes and digestion system diseases by the marital status (married and unmarried - never married, the widowed and the divorced) were calculated per 100 000 person years and standardized by age. Inequalities in mortality were assessed calculating rate ratio, while trends in it - conducting the Joinpoint regression analysis.

Results:

Mortality from all analyzed causes of death among males and females in 2001 and 2014 was statistically significantly higher in unmarried compared to married. Inequalities in mortality by marital status increased statistically significantly in Lithuania throughout the period of 2001-2014 from cardiovascular diseases, cancer and external causes. The most significant increase in inequalities by 3.3% ($p < 0.05$) on average per year was estimated from external causes among males. Inequalities in mortality from digestion system diseases did not change significantly throughout the study period.

Conclusions:

Inequalities in mortality by marital status increased significantly in Lithuania throughout the period of 2001-2014 with the most significant increase from external causes.

Key messages:

- Mortality from all analyzed causes of death among Lithuanian males and females in 2001 and 2014 was statistically significantly higher in unmarried compared to married.
- Inequalities in mortality by marital status increased significantly in Lithuania throughout the period of 2001-2014 with the most significant increase from external causes.

Public health monitoring in Sweden focusing on inequality – a developmental work

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Issue/problem:

The overarching goal of the Swedish public health policy is to create the right societal conditions for good and equitable health throughout the population, and to reduce avoidable health inequalities within a generation. Relevant health topics and dimensions of inequalities in health should be monitored to enable effective interventions on the local, regional and national level. To achieve this a strong national health monitoring system (HMS) is central.

Description of the problem:

The objective was to develop a high quality HMS to monitor a broad perspective of public health and its determinants, complemented by a more focused monitoring system of inequalities in health, with relevance on the local, regional and national level. A theoretical framework was developed and empirical mapping of relevant indicators conducted. An expert group was consulted and a country assessment of how to monitor health inequalities was carried out within the Joint action Health Equity Europe project. The developmental work started in 2018 and is not yet completed.

Results:

A web-based monitoring system has been implemented to cover the broad perspective of public health and its determinants. All indicators are reported at the national level and, when possible, degradable at the local and regional level. In addition, a report with a focus on inequalities in health on a national level is published annually, and a longitudinal indicator-based comparative study, with results from Sweden's 21 regions and 290 municipalities was published in 2019.

Lessons:

General public health and inequalities in health may need to be monitored in different ways. To enable effective interventions, consideration must be given to at what level - local, regional or national - policy decisions are made.

Key messages:

- High quality health monitoring enables effective interventions.
- To reduce inequalities in health focused monitoring is required.

Development of a barometer to display and monitor health and wellbeing on the neighborhood level

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Background:

Neighborhoods and their characteristics play a key role for establishing and maintaining health and wellbeing of their residents. However, before programs promoting health and wellbeing in the neighborhood can be planned and implemented, it is necessary to identify local needs for action. This is especially important for the stakeholders that work in the neighborhood (e.g., employees of the local community, headmasters of schools). We thus developed exemplary for Herzogenried -a neighborhood in the German city of Mannheim- a barometer that aims to assess and monitor health and wellbeing in the neighborhood and indicates potential needs for action.

Methods:

We conducted a detailed literature search to identify indicators that were associated with health and wellbeing in neighborhoods. Based on the search we created a primary list of indicators, which we presented and discussed during 15 meetings with a total of 26 different stakeholders. Available data on the indicators agreed on were checked for accuracy, statistically processed, and visualized for incorporation into the barometer.

Results:

The barometer consists of the following eight dimensions which in total include 80 indicators: population structure, population development, household structure, material wellbeing, education, family and upbringing, health, and personal security. The barometer also includes a map that displays structural characteristics of the neighborhood such as physicians, schools, supermarkets. An important challenge we faced was the availability of indicators as some of them were only accessible at the community level or for specific age groups.

Conclusions:

The barometer offers a comprehensive overview on the neighborhood, provides first hints for the local stakeholders on needs for action, and helps to prioritize the issues that should be addressed to promote health and wellbeing in Herzogenried. It will also serve as a prototype for other neighborhoods in the future.

Key messages:

- The barometer was planned to serve as a transferable tool to identify and prioritize action steps for neighborhood development and to help promoting health and wellbeing of their residents.
- As the barometer displays indicators relevant for various community stakeholders it can serve to identify joint goals and thus foster stronger trans-sectoral collaboration at the neighborhood level.

The applicability of methods for assessing comorbidities: The Cumulative Illness Rating Scale (CIRS)

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Introduction:

It is essential to compare the results of medical care in patients suffering from multiple, and complex diseases. CIRS is a risk adjustment tool useful for assessing patients' comorbidities although it needs to be used with precision following guidelines. The aim of this research is to assess whether organised seminars, planned to motivate the clinicians for correct data compilation, have an effect on the concordance of scores on the CIRS scores.

Methods:

A prospective, pilot study started in November 2018 on a sample of 49 patients admitted to a private clinic between December 2018 and February 2019. In the context of a seminar, an Resident Physician in Public Health (RP), distributed and explained the CIRS guidelines to the clinicians. CIRS scores were then calculated by the ward physicians and compared with those of the RP who successively analysed the same medical records. The inter-rater agreement was calculated through Cohen's kappa coefficient (κ), using Stata 14.2.

Results:

Concordance was excellent or almost perfect or substantial for 8 out of 14 categories: heart disease (k = 0.82), genitourinary disease (k = 0.90) blood pressure category (p = 0.72), sense organs (k = 0.75), upper gastrointestinal system (k = 0.70), lower gastrointestinal system (k = 0.76), musculoskeletal system and skin (k = 0.66), central nervous system (k = 0.69), endocrine system and breast (k = 0.63) and psychiatric diseases (k = 0.63). The agreement was moderate for the respiratory system (k = 0.48) and for the liver (k = 0.57), and was fair for Severity Index, Comorbidity Index and the vascular system (k = 0.24, k = 0.38 and k = 0.28 respectively).No Concordance in renal diseases (k = 0.00).

Conclusions:

Overall, the agreement of the scores between RP and clinicians was good, and it was possible to analyse the main weaknesses and difficulties of the clinicians. Subsequent seminars will be done to increase over time the concordance of the surveys.

Key messages:

- Organized seminars, planned to motivate clinicians to correctly compile the CIRS scores, were effective.
- The inter-rater agreement was good. Subsequent seminars will be done to increase over time the concordance of the surveys.

Population health indicators availability at regional level across the European Union

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Background:

The availability of reliable and comparable data at the regional level is extremely important to measure regional health inequalities. The aim of this research is to assess the data availability of the indicators included in EURO-HEALTHY's Population Health Index (PHI), a multidimensional tool developed to measure population health across European regions.

Methods:

Three consecutive steps where implemented: i) assessment of data availability and reliability of the indicators for the regional level and for the last year with data available; ii) application of a protocol to solve cases of missing data and assure the database completeness and iii) development of an availability scoring system, ranging from 0 (no data available) to 1 (all data available), by indicator and EU region.

Results:

A set of 39 population health indicators were assessed. The mean availability is 0.8, ranging from 0.46 (worst) to 1 (best). Indicators such as 'Unemployment', 'Higher education', 'Ageing index', 'Teenage motherhood', 'Victims in road accidents', 'Fatality rate', 'Life expectancy' and 'Infant mortality' present the highest scores (>0.95). 'Daily smokers', 'Pure alcohol consumption', 'Number of rooms per person' and access to 'Public water supply' and 'Wastewater treatment' present the lowest availability scores (<0.60), mostly due to the availability at the national level only.

Conclusions:

This study provides a comprehensive assessment of data availability of population health indicators from multiple areas of concern, at the EU regional level. The results highlight the urgent need for sub-national data in several domains that are important to close the health gap between and within countries. Still, as data collection in EU is driven by a policy derived framework, it is essential to give awareness to the regional scale, prior to the policy development.

Key messages:

- There is an urgent need for sub-national data in several domains that are important to close the health gap between and within countries.
- As data collection in EU is driven by a policy derived framework, it is essential to give awareness to the regional scale, prior to the policy development.

How to build and share an experiential knowledge in public health?

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Health promotion stakeholders are encouraged to base their intervention strategies on evidence. However, the evidence produced by public health research is outcome-based and provides little information on ‘‘how to act?’’ It is necessary to complete this evidence with experiential data constituting an evidence of a different nature, answering questions about organizations, skills and tools mobilized to achieve the results, and valuing skilled actors' knowledge and good practice.

For two years, a group of 15 French organizations has been working on capitalization and sharing experiential knowledge. This work is part of the setting up of a national evidence platform. After a benchmarking phase, the group developed and tested a capitalization method which focuses on the collection and analysis of qualitative data and aims to explain the contexts and processes at work in the actions: knowledge and skills, strategies, perceived challenges and facilitating factors, key moments. The group also worked on the structure, content and use of a shareable document.

The test has shown the pedagogical interest of the method for the actors who were invited to develop a reflective thinking about their action, as well as the relevance of this method to build experiential knowledge. The ongoing group's work concerns the dissemination of collected data. A practical guide for stakeholders is being finalised. The group is defining the selection process of the initiatives to be valued, in particular with regard to results that make sense for all stakeholders.

The main difficulty of the approach - its low level of recognition and entrenchment in public health - will be discussed during the presentation, as well as the necessity to ensure the legitimacy of this approach in a context where the notion of evidence is centered on quantitative data produced with an objective defined ‘‘a priori’’ and in a controlled context.

Key messages:

- This work opens the way for an original reflection in public health to build a shareable experiential knowledge, and to valorize and strengthen field actors' practical expertise.
- This work has pedagogical, political, scientific and informational impacts. It contributes to knowledge transfer and provides self-training, a practical vision of policies, and questions for research.

5.R. Digital health and social media

Commuter e-bike use is associated with increased total physical activity over time

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Background:

Active commuting such as cycling has been recommended as a practical way to increase population physical activity levels and improve health. Beside positive health effects observed in experimental studies, less is known about how e-bikes can improve public health outcomes in real-life settings.

Objectives:

To describe the patterns over time in physical activity, sedentary behavior, cardiorespiratory fitness and psychophysiological well-being in a population of new commuter e-bike users.

Methods:

This was a population-based prospective longitudinal study in France. 33 new users of e-bike were recruited and measured at 4-time points (T0, T1, T2, T3), from before the effective beginning of the e-bike use (T0) until a mean of 4.6 months of use (T3) (min: 3.2, max: 7). Repeated measures multilevel modeling was used on 4 waves of measurements to assess variations over time of e-bike use, total moderate and vigorous physical activity (MVPA) and total sedentary time (SED-time). Pre-post comparisons between T0 and T3 were performed to detect change in cardiorespiratory fitness, markers of adiposity, self-esteem, quality of life (SF12-v2), and physical activity motivations (EMAPS).

Results:

Adherence to e-bike commuting was high and stable, with a mean of 82% (3%) of weekly use. Multilevel modeling indicated that MVPA followed a significant increasing curvilinear trajectory over time, plateauing after 90 days (+ 21 MET-h/week compared to mean T0 at 33 MET-h/week). No significant change was found in SED-time, averaging a mean of 8.6 hours/day. Greater adherence to using an e-bike was associated with greater increases in MVPA. Several markers of physical and mental health improved.

Conclusions:

New commuter e-bike users undergo a significant increase in MVPA while being already at a high level before e-bike use onset. This increase in MVPA could be meaningful to attenuate detrimental effects of a persistent high sedentary behavior.

Key messages:

- MVPA significantly increases among new commuter e-bike users, along with improvements in physical and mental health.
- High SED-time is persistent, making increase in MVPA in a population with a moderately high initial level still crucial.

Using e-health to shorten treatment delay in patients with severe aortic stenosis

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Background:

Transcatheter aortic valve replacement (TAVR) is a relatively new alternative to open surgery in patients with a severe aortic stenosis at high risk of surgery but there are important variations in treatment delay which can lead to increased morbidity and mortality. Those delays have many causes, including patients' unawareness of the urgency, delays in obtaining the necessary preoperative tests and organizational factors at the hospital level. The aim of our study was to co-construct an e-health tool for patients and their families to empower them and improve knowledge on the disease and TAVR to ultimately decrease the delay between the medical decision for TAVR and the actual procedure.

Methods:

A prospective study was first carried out to identify organizational factors associated with variations in treatment delay (both at the patient and hospital level). A preliminary survey was sent to all TAVR centers in France to understand and describe their organization. Descriptive analyses were then carried out on the answers. In a second step, two focus groups were carried with, the first with patients and carers and the second with healthcare professionals in order to elaborate the e-health tool.

Results:

A website has been developed for patients and their families. It includes information in video form on aortic stenosis and its different treatments, on TAVR, the necessary tests required prior to TAVR (with a geolocalisation of available facilities nearby so that patients may know where to go), and what they can expect during the hospital admission and after their release. Patients undergoing TAVR will be informed of the website's existence by their cardiologist. Web pages intended for healthcare professionals who are not TAVR specialists (general practitioners…) will also be available on the website.

Conclusions:

A cluster randomized controlled trial will now test the efficacy and efficiency of the e-health tool in reducing TAVR treatment delay.

Key messages:

- We built a e-health tool in collaboration with patients, carers and healthcare professionals to increase patients' knowledge on aortic stenosis and TAVR.
- The website will provide information through videos to empower patients and ultimately decrease treatment delay and its associated morbi-mortality.

The use of digital devices in the field of healthcare in Bulgaria

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Background:

The opportunities that information and communication technologies provide in the field of healthcare are many and constantly growing. Thanks to them, consumers have access to health information, consultations and remote treatment and connection with medical centers. They help to improve health promotion activities, whose mission is to promote health as a core value. The aim of the present study is to explore the attitudes regarding the use of digital devices in the field of healthcare of Bulgarian population.

Methods:

A direct anonymous survey was conducted among 356 respondents, randomly selected and with an average age of 38.26 ± 0.15 (110 men and 246 women). The study was conducted from October 2018 to April 2019. The data analysis was performed using the statistical software SPSS v.23.0.

Results:

The results showed that 78.9% of respondents have used or are willing to use digital devices to search for and record health information. A statistical gender difference was found in the answer to the question of using a digital device for self-registration of information ($\chi2 = 28.6$, $P < 0.05$), as women are more likely to do so. More than 75% of respondents are willing to share health information with a medical professional in real-time via the internet. Older people are more reserved and hesitant about providing health information to a state agency (66.7%). The smartphone and computer/laptop are among the most preferred digital modalities in the healthcare field, with men and younger respondents more likely to use digital devices in relation to their health ($\chi2 = 39.9$, $P < 0.05$). Women are more critical about the use of information and communication technologies in healthcare ($\chi2 = 48.2$, $P < 0.05$).

Conclusions:

The present study found a positive attitude among all respondents towards the introduction of modern technologies in the healthcare field and the opportunity of remote contact with medical professionals, using personal digital devices.

Key messages:

- The opportunities that information and communication technologies provide in the field of healthcare are many and constantly growing.
- The aim of the present study is to explore the attitudes regarding the use of digital devices in the field of healthcare of Bulgarian population.

Assessment of the e-health system in the Kaunas City Outpatient Clinic

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Background:

The Lithuanian National Electronic Health (e-health) System was only launched in 2015. The aim of this study is to evaluate the e-health system in the Kaunas City Outpatient Clinic using a system of balanced performance indicators.

Methodology:

The survey was carried out from October until December, 2018, at the Kaunas City Outpatient Clinic (Lithuania). The study included 264 medical staff members and 384 patients.

Results:

62% of the patients and 100% medical staff of the clinic used various e-health system services. The most often used services by the patients were SMS reminder (75.5%), online registration (70.8%) and electronic prescription (59.3%). The physicians took the most advantage of assigning electronic prescriptions (88.2%), filling the sickness certificates (78.9%), booking laboratory tests and receiving their results electronically (63.9%). Majority of the medical staff and patients stated that the e-health services are of high quality (77.6 and 89.5%, respectively), reliable (86 and 90.8%) and have a wide spectrum of services (75.3 and 93.7%). The most common problems that patients faced when using the e-health system services were the malfunctions and failures of the system (68.9%) or missing health data of the patient (59.7%). According to the medical staff, e-health system technologies do not cover the needs of employees in full extent (95.1%), also, the e-health system is still not completely reliable (97.7%). Only 56.7% specialists stated, that they have enough skills to work with the e-health system, 77.7% would like to improve their professional qualifications in this field. The Clinic used the funds of the institution, municipality or EU structural funds to develop the e-health system, update the computer equipment and software, and acquire licenses.

Conclusions:

More efficient and effective e-health services and developing the capacity of the e-health usage are required to promote high-quality health care in Lithuania.

Key messages:

- Although majority of the patients and medical staff members use various e-health system services and are satisfied with their quality, there still are problems with the operation of the system.

- Specialists feel the lack of skills to work with the e-health system.

E-health and governance models - a scoping review

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Background:

Research has shown that national large-scale e-health projects are rarely defined as successful. **Methods:** We have conducted a search in the PubMed database on governance models.

Results:

Our search resulted in 220 hits, 11 papers included. We sorted these in four health systems Governance takes three different paths. 1) governance of e-health - how governments govern e-health programs through national and regional strategies, standards, incentives, legislation 2) governance through e-health - e-health as a strategic tool to obtain national health policy goals 3) governance in e-health - governance in medical networks initiated bottom-up and run by clinicians.

In the Single-Payer we find two papers. Both these describe governance of e-health. When the processes had been running for a period of time it shifted to governance through e-health. Two papers from New Zealand describe top-down governance model of e-health. Under the Multi-Payer health system we find a paper that describes the experiences of realizing a national telehealth network in Australia through a governance model in e-health. Under Unknown health system and national governance models, we include a paper that describes a governance model of e-health in Haiti. Two other papers describe the tension between non-profit and for-profit organizations on access to health data and domain names. The authors questions how governments shall realize governance models which captures these new aspects in healthcare. The second paper describes the challenges faced by the authorities' governance of the purchase and sale of health domains when public health institutions do not have an overview of this. The papers in this category may question if there is a need for a fourth governance model in e-health on the global level.

Conclusions:

The development of governance models are not static but part of processes and context dependent. Need for a fourth governance model on the global level.

Key messages:

- Research has shown that national large-scale e-health projects are rarely defined as successful.
- Currently scattered knowledge on how large-scale e-health projects that bring economic, clinical and societal benefits are governed.

How effective is AAL? Results from an RCT among older persons in Austria

Kerstin Loeffler

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Background:

Many older people wish to remain in their own environment for as long as possible; an aim shared by the wider community. Here the results of the RegionAAL study (Steiermark, Austria) are reported.

Methods:

An RCT was implemented to evaluate a programme of interventions (e.g. medication, drink and physical activity reminders, automatic light systems, watches to detect falls, video telephone with carers). Data was collected via quantitative questionnaires at baseline, 6 months and 1 year regarding quality of life and carers' burden.

Results:

111 persons and 104 carers took part in the intervention group; 110 participants and 100 carers in the control group. Participant characteristics were similar at baseline. Average age was 76 years. Around 1/3 were formal carers. A tendency for more persons in the control group to require assistance after one year could be observed. The subscales autonomy and participation of the WHOQOL-OLD showed some significant declines in the control group (no deterioration in the intervention group). No differences between study arms regarding general health, chronic conditions or hospital admissions were observed. Expected reduction in worry among carers could not be observed, although there was a tendency for some aspects of burden to be reduced. The interventions did not lead to a reduction in carers' workload; neither did the carers see any direct improvement of their situation.

Conclusions:

Some technologies such as cognitive games on the tablet, portable door bell and automatic light sensor were positively assessed. The participants in the intervention group scored better on autonomy and participation subscales than the control group; the intervention group also fared somewhat better regarding independence. The technologies had little influence on general health states or quality of life of participants or carers. Further good quality studies are needed before AAL technologies are considered as a public health initiative.

Key messages:

- AAL may reduce aspects of worry among carers and prevent age-related decline in autonomy, participation and independence among older persons but not have an effect on general health status or burden.
- AAL has only a very limited impact upon general health status or quality of life of older persons and the general burden experienced by carers.

Visualising Q - from the bootstrap to interactive graphics

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Introduction:

The MIDAS (Meaningful Integration of Data Analytics and Services) project is developing a big data platform to maximize the use of health & social care data. The goal is to link data sources to support senior managers & policy makers in delivering services. The project includes 4 case studies, in 4 countries. As part of the evaluation, we need to understand the perspectives of the users, developers, and senior managers involved, and to see how these change over time. We employ Q-methodology, an objective mixed method for the study of human perspectives, to do this. In this paper we describe the use of bootstrap methods, and visualizations to assist in the execution and interpretation of the first round of our Q study.

Methods:

A concourse of 36 items was developed from the literature, a logic model for the project, and a series of semi-structured interviews with project participants. Sixteen people (3 female, and 13 male) took part in the Q study, six developers, five managers, two health professionals, and 3 others. The 36 statements on the concourse were ranked online, by each participant, using the HTMLQ software, in order of their agreement with each statement. These are then subjected to a form of factor analysis, but by person, not by statement, using the qmethod package in R.

For each Q-sort 1,000 bootstrap replications were done, using sampling with replacement. A range of visualisations were prepared, using ggplot2.

Results:

Visualizations of bias and variability showed modest levels of both, suggesting that the Q-method model fitted well. Interactive visualizations of the factors, and respondents, were done. These showed distinct clusters of respondents, with divergent perspectives on the project. These assisted in making final decisions, both on the number of factors to report on, and the interpretation of those factors.

Further use of advance visualisations is recommended for future Q-studies.

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Key messages:

- Q methodology is useful across many areas of public health, and is a valuable way of studying individual perspectives.
- Modern statistical visualisation tools can enhance the interpretation of Q methodology studies.

Training on health communication and social media: European public health residents' perceptions

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Background:

Theoretical knowledge about health communication (HC) and expertise in planning, implementation and evaluation of HC interventions are essential tools for Public Health (PH) specialists. In the social media (SM) era, specific abilities and digital communication skills are gaining importance.

Objective:

Our aim is to describe European PH residents' perceptions regarding their training in the HC field, with a focus on SM. We piloted a survey using Google Forms during the European Network of Medical Residents in PH (EuroNet MRPH) meeting in Turin, April 2019. We then spread the survey to other PH residents across Europe in July 2019. The survey consists of 25 questions (Likert scales from 1 = strongly disagree to 5 = strongly agree, or multiple-choices) divided in 5 thematic sections (HC theory, public speaking, traditional media based HC, SM based HC, HC impact evaluation). Questions aim to map HC topics covered in residency educational programs, learning methods, and the perceived importance of HC skills.

Results:

The study included 114 residents from 10 countries (37% Italy, 23% Portugal, 10% UK, 9% Spain, 8% France, 13% other). Participants perceived they receive the best training in the areas of public speaking, impact assessment and HC theory (median 3, IQR 2-4). Conversely, for traditional and SM based HC, training was perceived as unsatisfactory (median 2, IQR 1-4 and 1-3 respectively) with self-education as main learning method (51%). Public speaking and traditional HC were identified as the most important HC skills for PH specialists (median 5, IQR 5-5), while less importance was attributed to SM based HC (median 3,5, IQR 3,25-5).

Conclusions:

Despite SM are playing a crucial role in public HC, specific training seems to be scarce in this sample. Although residents perceive SM based HC skills as important, they consider them less important than other HC skills. Further analysis is needed in order to explore the perceived relevance of SM in PH residents training.

Key messages:

- Training on health communication via social media is scarce among European public health residencies. Common training programs across European residencies in PH should address this educational need.
- European public health residents perceive social media based health communication skills as important, but not as important as traditional media based health communication skills.

A digitalized methodology to strengthen health equity: control, influence and participation

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Problem:

Angered Hospital is situated in the northeast of Gothenburg, Sweden, serving municipalities with high prevalence of ill health. Dedicated to increase health equity, the hospital has established a Public Health Unit (PHU) to support residents to healthier lives. PHU found that lack of transparency concerning strategies, reflections and results hindered knowledge-exchange between public health practitioners. Also, information from the execution of public health interventions and programs needed to be more accessible for policy-makers and researchers.

Description:

PHU developed a digitalized methodology for systematic steering. It draws on control, influence and participation, using Social Cognitive Theory to plan for strategies. The evaluation build on norm-critical reflections of structured reports. Themes include: How to improve efforts on the structural level? What measures do we plan for and conduct to enhance participation from residents? Quantitative goals were set.

Results:

222 activity reports were launched and discussed by team members, leading to professional development. Strategies to support self-efficacy were used throughout. The strategy ''reciprocal determinism'' was planned for more than used, due to giving floor to participants to raise their issues. Methods that draw on transparency, sound evidence and continous collaboration allow for residents to rethink their lifestyle and strive for change. Issues for future development included the importance og giving time for trust and shared values to emerge. Quantitive goals were reached.

Lessons:

Quality assurance of public health work enables formative and summative evaluation, increases potential to close the health gap, provides policy-makers with valuable knowledge and opens for research. Trust and shared values are vital at all levels. The methodology allows for organizations to develop their health literacy in order to include and give voice to people in underserved areas.

Key messages:

- Public health units aiming at health equity should use tailored evidence based methods, including norm-critical reflections.
- Digitalizing a methodological instrument increases accessability and transparency which enables common knowledge development.

Social network and grief: a text mining analysis

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Introduction:

Grief represents a multifaceted response to loss. Several dimension such as physical, cognitive, social, spiritual and philosophical are involved while an individual is experiencing loss. Often bereavement and grief are used interchangeably, however they are two very different concepts, bereavement refers to the state of loss while grief is the reaction to that loss. Each individual experiences loss differently, this is often connected to the culture of the individual in terms of culture per se or religion. Furthermore loss pertains not only to the individual who is directly involved and to its family but the entire environment of the person, in terms of community for instance. How individuals live and communicate death, loss and grief on online social network seems to have a role in coping and managing the loss itself.

Methods:

Text mining analysis was performed using web tools and Taltac 2.11. A text analysis of posts and discussion on open online social network was carried out in order to better detect which kind of coping activity was developed by participants. Specifically 149 losses post and more than 10.000 comments were analyzed.

Results:

Loss, bereavement and grief represent one of the most relevant topics on social network. Two main themes were identified. The first is focused on religion and spiritual support in faith, while the second on emotional support and affective-type closeness in which friends (virtual or not) support other individual having previously experienced the same losses. Analysis suggests that individuals are able to support peers in a wide range of way, furthermore virtual support is easier and more straight forward with respect to traditional and face to face relationship.

Conclusions:

This study display that individuals recognized a new way to be supported through social network. Individuals feel to be with close friends and at the same time to have the opportunity to live the loss by themselves without a face to face relationship.

Key messages:

- Social network 4 grief.
- Virtual friend give support.

Media Freedom is the Primary Culprit for Depressive Disorders: A Cross-National Analysis

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Background:

There has been much speculation about social environments causing an epidemic of depression. The objectives of this study are to examine how media freedom influences prevalence of depressive disorders. A direct effect of free media is great levels of information complexity causing poor mental health. Two indirect effects are that media freedom facilitates modernization, which is associated with competition-related stress, and government investment in social protection, which impedes the person's ability to manage stress.

Methods:

The study used a cross-sectional analysis on determinants of prevalence of depressive disorders in 2015 covering 98 democratic countries. Media freedom was measured as the degree to which a country allows the freedom of news and information of print media, television, and radio broadcasting (0-100: least to most free). Control variables were then added, including GDP per capita growth, population density, country latitude, and religious affiliations. Further, a mediation analysis was applied to test if there is a causal pathway that links the degrees of media freedom and the levels of economic development or/and social protection to prevalence of depression.

Results:

We found that an increase in the score of media freedom by 10 resulted in a 0.20 percentage point increase in prevalence of depressive disorders (%) (0.20, CI = 0.10-0.30). Our theoretical expectations were still confirmed when this study examined the relationship for each year between 2011 and 2014 (e.g. in 2014, 0.19, CI = 0.09-0.29), used an alternative index of media freedom from a practitioners' view (0.17, CI = 0.02-0.32), or measured each country's level of internet and digital media freedom (0.30, CI = 0.10-0.49). Further, a mediation test showed that 39.88% and 21.38% of the total effect was mediated through the economic and social pathway respectively.

Conclusions:

The findings suggest that great levels of media freedom matter in increasing prevalence of depression.

Key messages:

- Great levels of media freedom matter in increasing prevalence of depression.
- There are direct and two indirect effects of media freedom on prevalence of depression.

Parents and health professionals' opinions on information tools on mandatory childhood vaccines

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Background:

South-eastern France is marked by insufficient vaccination coverage for several vaccines and some mistrust of its population towards vaccination. In this context and given the application of new vaccination obligations for early childhood, we carried out a qualitative survey to study opinions of parents and health professionals (HPs) on information tools on vaccination (ITV).

Methods:

An inventory of French existing ITV was conducted to select a diverse set of 17 ITV for our qualitative evaluation. In 2018, we carried out 26 individual interviews with parents of young children (recruited in nurseries and kindergartens) and 5 focus groups with HPs (nurses, general practitioners, midwives and pediatricians; n = 33).

Results:

Most parents appreciated videos for their convenience: they used them to discover new/complex subjects in an entertaining way. Paper ITV remained essential mostly among parents with high socio-economic status (SES) or marked vaccine hesitancy, who also requested detailed information and scientific sources. Some parents of low SES considered ITV difficult to understand because of their length, quantity of information and scientific language. For HPs, giving their patients a paper ITV is a way to show the importance they attach to their patient's questions. HPs reported reluctance using videos during consultations. Some HPs stated their need for guidance on two aspects: 1) key discussion points to use when giving an ITV to parents and 2) most appropriate timing to give ITVs: prescription, injection. . .

Conclusions:

In the pool of tested ITV, articulation and formatting of arguments are not always optimal for HP and parents use. Tailored ITV should be available for the different needs of HP and parents, especially, for the latter, according to their SES and hesitancy profiles. ITV adapted to use during consultation are necessary.

Key messages:

- Information tools on vaccination (ITV) are not always optimal for HP and parents use.
- ITV should be tested and better adapted to the patient profile and consultation context.

The professional experience of a public health intern: How to promote health through a comic strip

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Issue/problem:

Public health is a complex discipline often misunderstood by medical students. The way these future professionals get to grips with this subject may impact their career.

Description of the problem:

Starting in November 2018, a young public health intern, who also happens to be an illustrator, shares with us her medical journey through a comic broadcasted online. This innovative approach aims to demystify public health to medical students and could potentially raise their interest in the profession. The author started her residency training at the French Regional Authority of Health Promotion and Education (Instance Régionale d'Éducation et Promotion de la Santé - IREPS).

Results:

She recounts some of her professional anecdotes: an empowerment project for struggling young people, a survey on environmental health... The chapters of her comic are periodically shared on social media to professional members and public health interns in Dijon. The French organization of Public Health Interns (Collège de Liaison des Internes de Santé Publique de France - CLISP) has been contacted to publish the comic nationally. An English translation has been considered as well. A printed edition will be distributed to medical students of the region during an introductory course in public health.

Lessons:

This experiential comic strip enables the intern to conduct a self-analysis of her work. The short format of each chapter obliges the author to focus on some understandable key messages. The comic strip receives a warm welcome as well as by the professional members of IREPS, and the young and skilled co-interns who all appreciate this discipline being presented under a new light.

Key messages:

- The comics strip represents a great tool to transfer knowledge in public health as it is attractive and ludic.
- It is essential to provide a better understanding of public health.

5.S. Health at work, sickness absence and disability pension

Empowerment: a key to promote the health of people with disabilities

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In France, health public policies for people with disabilities are based on specific laws, recommendations and systems of reference. This population is under the responsibility of the medico-social sector, which governs specialized institutions and services. These services favor a medical approach to health focused on access to care. Their main missions are to take care of disabled people with kindness on a daily basis and to adapt the care to each person's special needs, whatever the disability. They create links with families, organize the services offered and the living environments, administer their staff and collaborate with health professionals. As they ensure safety and health at all levels, from every individual project to collective life, they have a real opportunity to act on a set of health determinants.

The Ottawa Charter for Health Promotion refers to the empowerment and participation of the population as fundamental principles; this is also true as far as people with disabilities are concerned. With the principal stakeholders on a national level, we wrote a handbook in order to support the implementation of these principles in medico-social institutions and services: 'Promoting health and well-being in the medico-social field in cooperation with people with disabilities'' and their families.

In this presentation, based on concrete examples, we will outline how the five intervention strategies of the Ottawa Charter can apply to people with disabilities, their families and their communities, especially inside specialized institutions and services. We will pay particular attention to the intervention methods and pedagogical tools which can be used to initiate or to improve the participation of disabled people in decisions, through the valuing of their experiential expertise, the development of their social skills, the strengthening of their health literacy, family-professional co-education, and cooperative strategies.

Key messages:

- Specialized institutions and services can promote the health of the people with disabilities they care for, by acting on the determinants of their health and by mobilizing participatory strategies.
- To strengthen disabled people's participation, using their experiential expertise, developing their social skills and health literacy, and mobilizing co-education, are the best strategies.

How often do partial disability pensioners end up on a full disability pension?

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Background:

Extending working lives and deferring retirement have been important topics of discussion in recent years. Full disability pensioners seldom work, but most partial disability pensioners continuing working while receiving a pension. However, very little is known about how often partial disability pensioners end up on a full disability pension. The aims of this study were to investigate to what degree partial disability pensions become full disability pensions, and how age, gender, marital status, education, unemployment or a disability diagnosis are associated with that.

Methods:

The register data included 2,969 Finns who were aged 18-59 years and whose partial disability retirement started in 2010. The follow-up period ranged from 2010 to the end of 2015. Cox models were used to estimate hazard ratios for full disability retirement.

Results:

Approximately 40 per cent of the partial disability pensioners ended up on a full disability pension during the follow-up period. Partial disability pensioners who were older, had a lower educational level or a history of unemployment, or who suffered from mental disorders ended up on a full disability pension more often than others. The risk of full disability retirement was 1.5-fold among those with mental disorders compared to those with musculoskeletal diseases.

Conclusions:

Partial disability pensioners with a low education, a history of unemployment or who suffer from mental disorders experience a higher risk of ending up on a full disability pension. More focus should be paid to improving education, preventing mental health problems and unemployment in order to help the disabled work longer.

Key messages:

- Preventing partial disability pensioners from ending up on a full disability pension can extend their working lives.
- Partial disability pensioners with a low education, a history of unemployment or poor mental health more often stop working altogether. More focus should be paid to improving these issues.

Sickness absence and disability pension sequences before and after a bicycle crash; a Swedish study

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Background:

In recent years, bicycle injuries have increased, yet little is known about impact of such injures on sickness absence (SA) and disability pension (DP). The aim was to explore the long-term patterns of SA and DP among injured bicyclists.

Methods:

A longitudinal register-based study was conducted, including all individuals aged 18-59 years and living in Sweden, who in 2010 had incident in- or specialized out-patient healthcare for injuries sustained in a bicycle crash. Information about sociodemographics, the injury, SA, DP, and deaths were obtained from several nationwide registers. Weekly SA/DP data for four years: one year before and three years after the crash were used in sequence and cluster analyses. Multinomial logistic regression was used to estimate odds ratios (OR) and 95% confidence intervals (CI) for factors associated with each sequence cluster.

Results:

Among all 6465 individuals injured in a bicycle crash 2010, five clusters were identified: No SA or DP (60.2%), Immediate SA (17.7%), Episodic SA (15.3%), Part-time DP (1.6%), and Full-time DP (5.2%). Compared to the cluster No SA or DP, all other clusters had high ORs for female sex, older age, living in small cities/villages, and inpatient care. Immediate SA also had high ORs for cyclists who sustained a fracture (OR 5.53; CI 4.47-6.83), dislocation (3.26; 2.29-4.65), sprains and strains (2.29; 1.68-3.10), and internal injuries (4.39; 1.95-9.90). Episodic SA had high ORs for other traumatic brain injury than concussion (6.27; 2.23-17.64) and injuries located in the spine and back (3.52; 2.12-5.86), torso (1.78; 1.29-2.45), upper extremities (1.95; 1.54-2.46), and lower extremities (1.85; 1.43-2.41).

Conclusions:

Having SA in direct connection to the crash was associated with type of injury, in contrast to Episodic SA where the injured body region was of more importance, in particular other traumatic brain injuries and injuries to the spine and back.

Key messages:

- This nationwide study of new bicycle crashes found five clusters of sickness absence (SA) and disability pension (DP) sequences; No SA or DP, Immediate SA, Episodic SA, Part-time DP, and Full-time DP.
- The type of injury was more important for SA in direct connection to the crash, while the injured body region was of more importance for continued and repeated SA up to three years after the crash.

Sickness absence trajectories following labour market participation patterns in Catalonia, 2012-2014

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Background:

Working life is characterized by transitions between different employment status which could affect future health status. Previous studies on sickness absence (SA) have focused on risk factors in the workplace; however, there is scarce evidence regarding labour market participation (LMP) patterns. The aim of this study is to examine the association between prior LMP patterns and the course of SA.

Methods:

Cohort study based on a sample of 11,968 salaried workers affiliated with the Spanish Social Security system, living in Catalonia, who accumulated more than 15 days on SA at least in one quarter during 2012-2014, from three working life cohorts according to the working life stage in 2002: early (18-25 years), middle (26-35 years) and late (36-45 years). Sequence analysis was used to identify LMP patterns (2002-2011). Latent class growth analysis was applied to identify SA trajectories (2012-2014). Finally, crude and adjusted odds ratios (aOR) were estimated using multinomial logistic regression models.

Results:

Overall, four SA trajectories were identified: low stable (83%-88% of the workers), decreasing (5%-9%), increasing (5%-11%) and high stable (7%-16%) accumulated days on SA, for men and women. Similarly, seven LMP patterns were obtained: stable employment (63%-81%), increasing employment (5%-22%), delayed employment (7%-8%), decreasing employment (4%-10%), varying employment (13%-14%), steeply decreasing employment (9%), and steeply labour market exit (8%). No significant associations were observed among LMP patterns and SA trajectories, except for young men, where an increasing employment pattern was significantly associated with a lower risk to increase days on SA over time (aOR: 0.21 [95% CI: 0.04-0.96]).

Conclusions:

A prior 10 years of LMP pattern does not seem to show an effect on the course of SA. A closer working life to the SA course could be considered to assess this relationship.

Funding: Grants FIS PI17/00220 and PI14/00057

Key messages:

- A longitudinally approach is warranted to evaluate the relationship between working life and sickness absence.
- Extended prior working lives are not related to the course of future sickness absence.

Sick leave and disability pension before and after breast cancer diagnosis: a Swedish cohort study

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Background:

Most working-aged women are, after diagnosed with breast cancer (BC), on some sickness absence and/or disability pension (SADP). We aimed to explore possible trajectories of their previous and subsequent SADP days and risk factors for consistently high levels of future SADP.

Methods:

In a longitudinal cohort study of all 3536 women in Sweden aged 19-64 with a first BC diagnosis in 2010, we calculated their annual SADP net days from two years before to three years after BC diagnosis date. A group-based trajectory model was applied to depict SADP patterns. Logistic regressions were used to calculate odds ratios (OR) with 95% confidence intervals (CI) for having >90 or > 180 SADP days/year in the three postdiagnostic years.

Results:

Three trajectories of SADP days/month over the five years were identified: ''high'' (30% of all)'', ''increase only around diagnosis'' (61%), and 'constant very high' (9%). Across the study period, the risk factors associated with constantly high levels of SADP days (>90 or > 180 days/year) were similar. Particularly, factors significantly associated with having annual SADP >90 days during all the three postdiagnostic years were: stage II cancer (OR = 4.59; 95% CI 2.98-7.07), stage III+IV (OR = 26.57; 13.52-52.22), prediagnosis SA 1-30 days (OR = 2.73; 1.30-5.70), prediagnosis SA > 90 days (OR = 24.52; 12.25-49.08), and prediagnosis DP (OR = 659.97; 292.52->999.99).

Conclusions:

When diagnosed with BC, SADP increased significantly postdiagnosis, however, decreased with time and the absolute majority had no SADP the third year after BC diagnosis. Advanced cancer stage and previous high SADP were the highest risk factors for later SADP.

Key messages:

- Most breast cancer survivors' work capacity (sickness absence (SA) and disability pension (DP) is only affected shortly post-diagnosis. Prior SADP and high cancer stage were strongest risk factors.
- Register-based information on breast cancer patients and their sickness absence and disability pension before and after diagnosis are useful to identify different types of return-to-work patterns.

Effects of a work-stress intervention in Swedish primary care versus treatment as usual: RCT-study

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Background:

Work stress is an increasing burden in society. To identify early symptoms of work stress in primary health care (PHC) could result in earlier and better adjusted care. A work stress questionnaire (WSQ) was developed in PHC for this task. We aimed to evaluate if the use of WSQ, in combination with physician's feedback, results in differences in health care visits and treatment compared to treatment as usual (TAU) in patients reporting high stress. Our hypothesis was that patients receiving the intervention would generate more visits to rehabilitation providers during follow-up compared to TAU.

Methods:

A two-armed RCT was conducted at seven primary health care centres (PHCC) in Region Västra Götaland, Sweden. One group received the WSQ-intervention and the controls received TAU. Employed not sick-listed persons aged 18-64 that sought care for mental and physical health complaints at the PHCCs participated. Register data on health care visits and treatments 12 months prior inclusion and 12 months after was obtained and analysed with Fisher's exact test together with questionnaire data (WSQ and background features).

Results:

A total of 271 participants were included in the study, 132 intervention and 139 controls. The proportion that visited psychologists/psychotherapists was higher among the intervention group with high stress (19.5%, n = 87) during follow-up compared to corresponding controls (7.2%, n = 97) (p = 0.048). Collaborative care measures were more common among the stressed intervention participants (23%) post-inclusion compared to the stressed controls (11.3%) (p = 0.048).

Conclusions:

Significant differences were found between the WSQ intervention group and the controls reporting high stress in visits to psychologists and in amount of received collaborative care. This confirms our hypothesis that the WSQ can help physicians to identify work stress and give suitable rehabilitative measures at an earlier stage in the care process compared to TAU.

Key messages:

- The use of WSQ with physicians' feedback generated more visits to psychologists and more received collaborative care compared to treatment as usual.
- Findings of the study indicate that the WSQ can assist in identifying work stress in primary care and accommodate rehabilitative measures compared to treatment as usual.

Work disability before and after incident myocardial infarction and subsequent common mental disorder

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Background:

This study investigated the extent to which work-disability patterns including sickness absence and disability pension (SA/DP) before and after acute myocardial infarction (AMI) were associated with subsequent common mental disorders (CMDs) such as depression and anxiety in AMI patients without previous CMD.

Methods:

A cohort of 11,493 patients aged 26-64 years without previous CMD with incident AMI during 2008-2010 were followed up for CMD measured as antidepressant prescription through 2013. Four SA/DP trajectory groups during the 3 years pre-AMI and 1 year post-AMI were identified. Hazard ratios (HR) and 95% confidence intervals (CI) were estimated in Cox models.

Results:

Higher pre-AMI SA/DP levels (>1-12 months/year), compared to the majority of patients (78%) following low increasing annual levels (increasing up to 1 month/year) of pre-AMI SA/DP, were associated with a 40-60% increased CMD rate. Regarding post-AMI findings, constant high (~25-30 days/month) and steeply decreasing SA/DP levels within the first 3 months were associated with a 76% and 35% higher CMD rate, respectively, compared to constant low (<1 days/month) levels. Conversely, a gradually decreasing pattern of post-AMI SA/DP over a 12-month period suggested protective influences for CMD (HR = 0.80), even after adjusting for sociodemographic and medical factors.

Conclusions:

This is the first study to demonstrate that pre- and post-AMI work disability patterns are associated with subsequent CMD risk in AMI patients. Work disability patterns should be considered in clinical practice as an indicator of AMI prognosis in terms of CMD risk.

Key messages:

- Increasing and high persistent levels of pre-AMI work disability are associated with higher risk of subsequent

CMD, while gradually decreasing post-AMI work disability has a favourable CMD prognosis.
- Pre- and post-AMI patterns of work disability (sickness absence and disability pension) can be a useful marker in terms of CMD prognosis.

Childhood adversities and chronic pain among midlife employees
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Introduction:

Chronic pain is common among employees. Childhood adversities are known determinants of adult health but their association with chronic pain in adulthood is largely unknown. We aimed to examine the associations between childhood adversities and chronic pain among midlife employees.

Methods:

Data on seven childhood adversities and chronic pain (pain having lasted at least 3 months) were derived from the baseline survey of the Helsinki Health Study collected in 2000 to 2002 among 40 to 60-year-old employees of the City of Helsinki in Finland. The study included 8140 employees of whom 80% were women. The analyses were made by logistic regression and the results are presented as odds ratios (OR) and their 95% confidence intervals (CI). Age, gender, father's education, own education, marital status, working conditions, sleep problems and common mental disorders were included as covariates.

Results:

Economic difficulties in the childhood family (OR 1.60, 95% CI 1.41-1.81), childhood illness (1.74, 1.45-2.08), parental divorce (1.26, 1.07-1.48), parental alcohol problems (1.34, 1.18-1.52) and bullying in school or among peers (1.59, 1.37-1.89) were associated with an increased odds of chronic pain in midlife. Adjusting for father's education, own education and marital status did not contribute to the associations. Working conditions, sleep problems and common mental disorders slightly attenuated the associations between childhood adversities and chronic pain.

Conclusions:

Childhood adversities associate to chronic pain in midlife. The results suggest that promoting well-being among children might lead to less pain decades after childhood.

Key messages:
- Childhood adversities are associated with chronic pain in adulthood.
- Considering well-being among children might lead to less pain decades after childhood.

Job demands & control among employees in Sweden aged 55-64 and labour market status 11 years later
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Background:

As discussions about extending working lives are ongoing, more knowledge is warranted on how psychosocial working conditions are associated with labour market status in older age.

Aim:

Among employees aged 55-64 years, explore associations between job demands/control with their labour market status 11 years later, using a job exposure matrix (JEM).

Methods:

A population-based prospective cohort study using nationwide register data. All 616,818 individuals in Sweden who in 2001 were in paid work and aged 55-64, were categorized using JEM into 9 groups, based on tertiles. They were followed up in 2012 regarding their labour market status (main income from: paid work, old-age pension, marginalised (no income/social assistance), sickness absence >183 net days, emigrated, dead) using multinomial logistic regression for odds ratios (OR) and 95% confidence intervals (CI), controlling for labour market status and sociodemographics in 2001. Analyses were stratified by sex.

Results:

The majority (women: 84.9%, men: 80.3%) had main income from old-age pension at the 11-year follow-up; 4.7% from paid work (women: 3.9%, men: 5.6%). Those initially in jobs with high demands were less likely to be marginalised at follow-up (OR women high demands/medium control 0.51, CI 0.38-0.68, high demands/high control 0.68, CI 0.50-0.92; OR men high demands/medium control 0.55, CI 0.31-0.96, high demands/high control 0.47, CI 0.30-0.73). Those in occupations with low demands were less likely to be in paid work (OR women low demands/low control 0.56, CI 0.51-0.62, low demands/medium control 0.63, CI 0.58-0.69; OR men low demands/low control 0.56, CI 0.51-0.63, low demands/medium control 0.63, CI 0.58-0.69).

Conclusions:

High job demands with high job control among people aged 55-64 in 2001 were associated with higher rate and OR of having main income from paid work in 2012, and high job demands regardless of level of job control were associated with less marginalisation.

Key messages:
- Levels of job demands when aged 55-64 were associated with labour market status 11 years later for women and men, while levels of job control were less so.
- High job demands were associated with a higher likelihood of being in paid work and lower likelihood of being marginalised at the end of follow-up.

Health inequality and self-employment in South Korea
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Background:

Self-employed persons work for themselves as owners of a business rather than for an employer. Although self-employed persons have autonomy and flexibility, they are vulnerable to workplace health and safety hazards. However, there has been little interest in the health of self-employed persons, especially in small business owners. This study investigated the health status of small self-employed business owners compared to standard workers.

Methods:

The third Korean Working Conditions Survey for a total of 32,630 workers aged 20-59 were analyzed. A small business was defined as self-employment with 0-4 workers. Standard employment included full-time employment with a permanent or one-year contract. Health outcomes included the presence of depressive symptom and 8 types of physical health; hearing problems, skin problems, backache, muscular pains (upper limbs), muscular pains (lower limbs), headaches/eye strain, injuries, and overall fatigue.

Results:

Among 32,630 workers, 10,652 (32.64%) were small business self-employed. Compared with standard employed workers, small business self-employed had a 1.2-fold [adjusted OR (Odds Ratio) =1.20, 95%CI (Confidence Interval) 1.09-1.32] increased likelihood for depression after adjustment for potential covariates. Small business self-employed was at higher risk of work-related physical health problems: backache (OR = 1.16, 95%CI 1.06-1.26), muscular pains in upper limbs (OR = 1.19, 95%CI 1.12-1.27), and muscular pains in lower limbs (OR = 1.14, 95%CI 1.07-1.22).

Conclusions:

Our study found health inequality of small business self-employed, showing higher odds for mental and physical health problems in small business self-employed than in standardly employed workers.

Key messages:

- The current study showed vulnerability of self-employed in small business to health problems.
- Our study would be helpful to build up better working environment for small business owners and improve occupational health inequalities in South Korea.

Age-group differences in associations of working hour characteristics and short sickness absences

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Background:

Working-hour characteristics are linked to disturbed sleep, but little is known about their association with short sickness absences (SA). We investigated the association between working hour characteristics in shift work and the incidence of short (1-3 days) SA in three age groups.

Methods:

The data was from the hospitals' electronic working time records. The final sample was restricted to the first incidence of short SA (1-3 days) from 2008 to 2015 and to shift working employees (n = 12156, 89% women). Age groups were < 35 (n = 5652), 35-49 (n = 3592) and ≤ 50 years (n = 2545). Work shifts (morning, day, evening, and night), quick returns (< 11 hours between two work shifts), length of work shift and weekly working time were calculated for case-crossover study design to compare the working hour characteristics of the 28 days preceding SA (exposure window) and those of the 28 days before the exposure window (control window). Conditional logistic regression models were run for odds ratios (OR) with 95% Confidence Intervals (95%CI).

Results:

Working hour characteristics, especially length of working hours, played the clearest role among those < 35 years of age. In this age group, exposure to > 25% of > 40 weekly working hours associated with an increased likelihood of short SA (OR 1.30, 95%CI 1.17-1.44), whereas weekly working hours had OR 1.02 (95%CI 1.02-1.03). Having only a few (≤ 4) quick returns decreased the likelihood of SA (ORs 0.31-0.54), whereas having ≥25 quick returns increased it (OR 2.75, 95%CI 2.44-3.11). The results showed mostly similar trends among those of 35-49 years of age whereas among older workers (≤ 50 years) only an association for quick returns was observed.

Conclusions:

Long working hours increase the risk of short SA among those ≤ 49 years of age and several quick returns among all age groups. These working-hour characteristics should be avoided to minimize SA and increased costs for the employer, but also to maintain public health.

Key messages:

- Unhealthy working-hour characteristics should be paid special attention in shift scheduling to avoid sickness absence.
- Good shift scheduling could assist in maintaining work-ability and therefore public health.

Gender and psychological distress: contribution of work-family balance

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Background:

Women suffer from psychological distress more often than men. Our aim was to investigate the potential contribution of work-family balance to this gender difference.

Methods:

Questionnaire data from the nationally representative 2013 Finnish Regional Health and Well-being Study (target population all adults aged 20 years or over, n = 88 377, response rate 53%), was restricted in the current analysis to those who were working and who had minor children (n = 26 442). Psychological distress was assessed using the Mental Health Index (MHI-5, cut off value< = 52). Participants answered six questions on balancing work and family demands (yes/no). We used logistic regression adjusted for age, education and marital status.

Results:

Women reported more distress than men (12.4% and 10.2% respectively, p = 0.000). We found statistically significant interactions between gender and two work-family demands (both p = 0.010): "I sometimes neglect my family when I am wholly absorbed in my work" was associated with distress in women (OR = 1.29, 95%CI 1.11-1.49), but not in men (OR = 0.95, 95%CI 0.79-1.14). "I feel inadequacy as a parent" had stronger association with distress in men (OR = 3.07, 95%CI 2.56-3.69) than in women (OR = 2.31, 95%CI 2.00-2.65). Both men and women had less psychological distress if they reported stopping thinking about their work at home or having more energy to be with the children when they also went to work. Correspondingly, they had more psychological distress if they felt they were neglecting home issues because of work or found hard to concentrate on work because of home issues. Common-law marriage was associated with psychological distress in women (OR = 1.43, 95%CI 1.22-1.68), but not in men (OR = 1.11, 95%CI 0.91-1.36).

Conclusions:

Women felt distress about neglecting family due to being absorbed in their work while men did not. Feelings of inadequacy as a parent were associated with distress more in men.

Key messages:

- Both women and men struggle to coordinate work and family, but expectations how job is divided may differ by gender.
- Actions to improve coordination between working life and family life are needed, both within families and by political decisions.

6.R. Mother and child health

Preterm delivery is associated with long-term risk of maternal renal disease

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Background:

Preterm delivery is an independent risk factor for maternal cardiovascular disease. Little is known about the association between preterm delivery and maternal renal function, and whether any association is independent of preeclampsia or intra-uterine growth restriction. This study aimed to examine the association between gestational age and long-term maternal chronic kidney disease (CKD) and end-stage kidney disease (ESKD).

Methods:

Using data from the Swedish Medical Birth Register, singleton live births from 1973-2012 were identified and linked to data from the Swedish Renal Register and National Patient Register (up to 2013). Women with pre-pregnancy CKD/ESKD, cardiovascular disease, diabetes, hypertension, systemic lupus erythematosus were excluded. Gestational age at delivery was the main exposure, treated as a time-dependent variable. Primary outcomes were maternal CKD or ESKD. Cox regression was used, adjusting for maternal age, year of delivery, country of origin, education, parity, interpregnancy interval, smoking, BMI, gestational diabetes. Models were stratified by exposure to preeclampsia or small for gestational age (SGA).

Results:

There were 3,847,694 pregnancies among 1,990,273 unique women. Nine percent of women ($n = 172,915$) had at least one preterm delivery (<37 weeks). Exposure to preterm delivery was associated with higher risk of CKD (aHR 1.48, 95%CI 1.41-1.54) and ESKD (aHR 2.52, 95%CI 2.17-2.92). Earlier gestational age at delivery was associated with increasing risk of CKD and ESKD. Women with spontaneous preterm delivery were at higher risk of CKD (vs. normal term, aHR 1.33, 95% CI 1.26-1.40) and ESKD (aHR 2.02, 95%CI 1.69-2.40) independently of preeclampsia/SGA. Associations persisted after excluding women who developed postpartum cardiovascular disease, hypertension or diabetes.

Conclusions:

Women who gave birth at earlier gestation were at higher risk of later CKD and ESKD. This association persisted independently of preeclampsia and SGA.

Key messages:

- Preterm delivery is an independent predictor of long-term maternal renal disease.
- Obstetric history should be considered as part of overall risk stratification for chronic kidney disease in women.

Global trends in incidence and mortality of neonatal encephalopathy due to birth asphyxia and trauma

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Background:

Neonatal encephalopathy due to birth asphyxia and trauma is a leading cause of premature death and long-term disability as estimated by the Global Burden of Disease (GBD) 2017 study. To evaluate comparative improvements in prevention and survival, this analysis evaluated GBD 2017 mortality to incidence (MI) ratios as a proxy for case fatality over time, location, and socio-demographic status.

Methods:

We derived estimates of cause-specific mortality and incidence at birth from GBD 2017, calculating MI ratios of neonatal encephalopathy in children <1 year. We analyzed temporal, geographic, and socio-demographic trends in incidence, mortality, and MI ratio.

Results:

Neonatal encephalopathy incidence shows little change over time, with global incidence in children under one essentially the same in 2017 (1,996 cases per 100,000 (1,334-2,912)) and 1990 (1,996 cases per 100,000 (1,331-2,926)). Regions show the same trend, though a large difference exists between the highest and lowest regional incidence, with incidence in Central Sub-Saharan Africa over 20 times higher than in Australasia. Over the same period, MI ratios for neonatal encephalopathy have decreased across all regions. Model input data represented 52 countries for prevalence and 145 countries for mortality, with notable data sparsity in Africa and Eastern Europe.

Conclusions:

Case fatality of neonatal encephalopathy, as approximated by MI ratio, has declined worldwide over the past three decades, but incidence has shown little change. This suggests treatment of neonatal encephalopathy has improved, but more research is needed on risk factors in order to increase prevention. Continued work is also needed to reduce disparities in incidence and mortality between countries with different levels of SDI. Improving data coverage in lower SDI regions will be critical to accurately monitor progress toward reducing inequity.

Key messages:

- Neonatal encephalopathy is a leading cause of premature death and disability. Incidence of neonatal encephalopathy has changed little since 1990, indicating more work is needed on prevention.
- Case fatality of neonatal encephalopathy can be approximated by the mortality to incidence ratio, and has declined worldwide over the past three decades, suggesting improvements in treatment.

Breastfeeding and Birth mode: comparative analysis between elective and in-labor caesarean section

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Introduction:

Evidence in literature suggests that the outcomes of children born by in-labor non-emergency caesarean section (CS) are better if compared to those born by programmed CS. The aim of this work was to evaluate impact of type of CS on neonatal outcomes and breastfeeding.

Materials and methods:

The cross-sectional study was performed in the Siena province (hospital of Siena and Poggibonsi) during the period January-December 2015. All females that gave birth by CS were included, except those that had emergency CS from severe medical indication (pre-eclampsia/eclampsia, fetal distress, intrauterine growth retardation, etc) or due to multiple pregnancy.

The sample was divided in two groups (programmed CS/CS in the presence of labor). The outcome variables were: necessity of hospitalization in neonatal intensive therapy unit (NITU) or resuscitation; weight loss after birth (%), hours passed between birth and first attack to the breast, type of breastfeeding at discharge (exclusive/mixed). The statistical analysis was performed with Stata 12.

Results:

In total 446 females were included (53.6% programmed CS). Any association between the type of CS and admission to NITU or resuscitation was observed.

Among the newborns born by CS in the presence of labor, there was a greater proportion of babies who attached to the breast immediately after birth (82% vs. 71%; $p < 0.05$) and also those exclusively breastfed at the moment of discharge (71% vs. 60%; $p < 0.05$).

The weight loss was lower in babies born by CS in the presence of labor ($8\% \pm 1.8$; 95% CI 7.7%-8.2% vs. $8.53\% \pm 1.7\%$; 95% CI: 8.3%-8.8%; $p < 0.05$).

Conclusions:

Our study confirmed the negative impact of the CS in the absence of labor on the breastfeeding initiation, probably due to incomplete activation of neuroendocrine mechanisms (release of oxytocin; etc). The CS in the presence of labor is more stressful from the organizational point of view, but it helps promotion of health through the facilitation of breastfeeding.

Key messages:

- In-labor non-emergency caesarean section is more physiological and helps to initiate and maintain breastfeeding.
- The CS in the presence of labor is more stressful from the organizational point of view, but it helps promotion of health through the facilitation of breastfeeding.

Maternal obesity and severe preeclampsia among immigrant women: a mediation analysis

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Background:

Severe preeclampsia is known to be associated with both maternal place of birth and obesity. However, the role of prepregnancy obesity has not been well elucidated on the causal pathway between maternal origin and severe preeclampsia. We aimed to test for and quantify a mediation effect of obesity in this association.

Methods:

A secondary analysis of the PreCARE prospective French cohort of pregnant women (n = 9,579). Adjusted path analysis logistic regression models tested for a mediation effect of obesity in the association between maternal place of birth and severe preeclampsia. Adjusted odds ratios and 95% confidence intervals for the total exposure-outcome association and for the direct and indirect/obesity-mediated components were calculated in addition to an estimate of the indirect/obesity-mediated effect.

Results:

95 (0.99%) women developed severe preeclampsia: 47.6% were non-European immigrants, 16.3% were born in Sub-Saharan Africa, and 12.6% were obese. Obesity was both associated with Sub-Saharan African place of birth and severe preeclampsia. Women from Sub-Saharan Africa had an increased risk of severe preeclampsia compared to European-born mothers (aOR 2.53, 95% CI 1.39-4.58). The obesity-mediated effect of the association was 18% (aOR 1.18, 95%CI 1.03-1.35).

Conclusions: Sub-Saharan African immigrant women have a two-fold higher risk of developing severe preeclampsia as compared to European-born women, one-fifth of which is mediated by prepregnancy obesity. Our results provide estimates of the benefit of decreasing obesity among at-risk women.

Key messages:

- Obesity, a modifiable risk factor, is a target for interventions to prevent severe preeclampsia among immigrant women from Sub-Saharan Africa.
- Future investigations should focus on better elucidating the role of other modifiable mediators such as interaction with the health care system and quality of prenatal care.

Combined effect of adverse childhood experiences and young age on self-harm ideation after birth

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Background:

Suicide among postpartum women is a new and emerging issue in developed countries. However, little is known about the combined effect of risk factors on self-harm ideation, although various risk factors have been found. The aim of this study is to examine the combined effect of maternal adverse childhood experiences and maternal age on self-harm ideation among postpartum women.

Methods:

The study comprised a cross-sectional study of 8,074 mothers participating in a 3-month health checkup between September 2013 and August 2014 in City A, Prefecture A, Japan. Main outcome was self-harm ideation assessed using the Edinburgh Postnatal Depression Scale (EPDS), item 10. Possible risk factors were maternal adverse childhood experiences (ACEs), maternal characteristics, relationship with husband/partner (e.g., feelings when pregnancy was confirmed), household characteristics, child characteristics (e.g., age, sex, birth weight), and postpartum characteristics, and postpartum depression status other than self-harm ideation.

Results:

Postpartum women with 3 or more ACEs and younger age (<25 years old) were 10.3 times more likely than those with no ACEs and older age to have self-harm ideation (95%CI = 5.3-20.2). This combined effect was also found in first-time mothers (OR = 7.6, 95%CI = 3.2-17.9).

Conclusions:

Postpartum women with 3 or more ACEs and who were younger than 25 years old were at a high risk for self-harm ideation. Providing prevention strategies aimed at mothers with multiple risk factors, especially younger age and ACEs, is warranted.

Key messages:

- Mothers with 3 or more ACEs and younger age had a high self-harm ideation risk.
- Providing prevention strategies for mothers with multiple risk factors is warranted.

The impact of psychosocial factors on breastfeeding duration in the BaBi cohort study, Germany

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Background:

Breastfeeding is considered beneficial for both mother and child. In Germany, national guidelines recommend fully breastfeeding for at least 4 months, a goal reached by only 34% of mothers in 2012. The WHO's recommendation of exclusively breastfeeding for six months was met by 19% only. Hardly modifiable factors such as socio-economic status and migration background have been associated with duration of breastfeeding but little is known about the impact of psychosocial factors such as personality traits and social support. We hypothesise that there are differences in the psychosocial profiles of mothers regarding the duration of breastfeeding.

Methods:

We analyse baseline and follow-up data of the Bielefeld BaBi birth cohort (2013-16). They include detailed migration and socio-economic backgrounds, as well as three measures of psychological characteristics: the optimism scale, the Big Five inventory and the locus of control scales. We perform bivariate and multivariate analyses in order to identify psychosocial determinants of fully breastfeeding for four and six months.

Results:

Out of 780 BaBi study participants, 548 fully breastfed for four months (70.3%), of which 279 continued until at least six months (35.8%). Logistic regression analyses show that fully breastfeeding for at least four or six months is independently associated with the intention to breastfeed and the attendance of antenatal class during this or previous pregnancies. Personality characteristics, social status and migration background show however no significant association with breastfeeding duration.

Conclusions:

Our study results support the promotion of individuals' breastfeeding intention and attendance to antenatal classes to increase breastfeeding duration. Since differences in breastfeeding practices have the potential to create inequalities in maternal and child health, more efforts are needed to intensify research on modifiable factors influencing breastfeeding duration.

Key messages:

- Neither psychosocial factors nor socioeconomic status were associated with breastfeeding duration.
- Two modifiable factors, breastfeeding intention and attending antenatal classes, were the main predictors of breastfeeding duration.

Postpartum women's experience of abuse in childhood, postnatal depression, and thoughts of self-harm

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Background:

Postnatal depression threatens the health of both mothers and babies. To improve maternal and child health in Seoul, South Korea, a nurse home visitation program for pregnant women and new mothers and babies has been implemented since 2013.

Methods:

Cross-sectional data collected from 9,124 mothers while they were visiting a public health center for prenatal services or a nurse was visiting their home within 6 weeks after birth between 2014 and 2018 were analyzed. Mothers were asked whether they had experienced physical, emotional, or sexual abuse in their childhood. Postnatal depression and thoughts of self-harm were measured using the Edinburgh Postnatal Depression Scale (EPDS). Postnatal depression was defined as a total EPDS score of 13 or higher; thoughts of self-harm were defined as a response of ''yes, quite often,'' ''sometimes,'' or ''hardly ever'' to the corresponding item, excluding the response of ''never".

Results:

Overall, 3.2% of mothers had experienced child abuse; 8.1% experienced postnatal depression and 5.4% reported thoughts of self-harm. Postnatal depression was more common in mothers who had experienced child abuse than among those who had not (24.2% vs. 7.6%). A similar pattern was found for thoughts of self-harm (21.1% vs. 4.9%, respectively). When controlling for mothers' age, economic status, history of receiving treatment for mental health problems, and other factors, having experienced child abuse was associated with a 2.73-fold increase in the odds of postnatal depression (odds ratio, 2.02-3.70) and a 3.58-fold increase in the odds of thoughts of self-harm (odds ratio, 2.58-4.96).

Conclusions:

Mothers should be screened for having experienced child abuse when providing public health perinatal care to improve mothers' mental health and parenting practices and to promote their children's growth and development.

Key messages:

- Child abuse may have a lifelong negative effect on victims, and the effect extends to the next generation's health and development.
- Public health policy and interventions to prevent child abuse are needed to tackle health inequality beginning in early childhood.

Prenatal care: missed opportunity for HBV prevention in women of childbearing age in rural Senegal

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Background:

Perinatal transmission of hepatitis B virus (HBV) constitutes an important risk in highly endemic countries including Senegal. Although the prevalence of chronic HBV infection is estimated at 11% in this country, specific data on women of childbearing age are sorely lacking. We described in this study the prevalence of the HBV antigen (HbsAg) in women of childbearing age in rural Senegal, as well as general knowledge on HBV and hepatitis B status awareness.

Methods:

A cross-sectional study including HBV screening was conducted at home in the rural Niakhar area. Chronic HBV infection was determined through HBsAg detection using dried blood spots. Socio-demographic and behavioral data were collected through standardized face-to-face questionnaires. The analyzes included 368 women aged 15-49 (67% married; 65% with at least 1 child) enrolled from October 2018 to March 2019.

Results:

Preliminary results show that 49 women (13%) had positive HBsAg. Only 68 women (18%) have already heard about HBV. Among them, 53% knew that there exists an HBV vaccine and 78%, 75% and 67% correctly answered that HBV can be transmitted through blood contact, childbirth and sexual intercourse, respectively.

Among the 233 (63%) women who had already given birth, 76% had attended at least 4 antenatal care sessions and 74% had given birth in a healthcare facility for their last pregnancy. However, only 1% reported to have already been screened for HBV. Main reasons reported for not having been screened were having never heard about this test (80%) and not having been offered screening during antenatal care sessions (10%).

Conclusions:

General knowledge and awareness of HBV status are particularly low in women of childbearing age living in rural Senegal, despite high antenatal care sessions attendance. Given the high prevalence of chronic HBV infection found in this population, it is urgent to ensure systematic HVB screening and to provide adequate information to women during pregnancy.

Key messages:

- The prevalence of chronic HBV is high in women of childbearing age in Senegal.

- National recommendations for women attending antenatal care sessions should include HBV screening and counselling.

Perception of health risk linked to environmental factors by pregnant women

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Bacground:

Recently, the International Federation of Gyneco-Obstetrics (FIGO) advocates limiting exposure to chemicals present in everyday products during pregnancy. To date, the chemicals, and the risks related, are not well-known, as well by perinatal health professionals (PHP) as by pregnant women (PW). AIMS: to estimate the sensitivity to the environment and the perception of risks related to chemical substances by pregnant women.

Methodology:

A descriptive cross-over study was carried out among pregnant women ((followed or hospitalized in different health establishments in Auvergne). The collection of data (socio-demographic characteristics, sensitivity to the environment, use of cosmetics, perception of environmental risks) was carried out by interviewers, using a standardized questionnaire. The statistical analysis (logistic regression) was performed with Modalisa® 8.0 (Kynos, Paris).

Results:

Three hundred questionnaires were analyzed. The sensitivity to the environment is estimated at 6.3 ± 1.7 (scale 0 to 10). For the majority of women, exposure to chemicals is primarily related to the use of cleaning products, DIY products, and gardening products. Food can also be a source of exposure (especially for pesticides). On the other hand, cosmetics are not perceived as products containing chemical substances, with potential risk to health. This vision of chemical substances is related to age, educational level, socio-professional category and sensitivity to the environment. Only 5% (19/300) of PW considered health professionals as referents on chemical substances and environmental problems.

Conclusions:

This study highlighted the sensitivity of pregnant women to environmental issues, but a lack of knowledge of chemicals and the risks which they represent for health. It is important to reinforce the information given to pregnant women by perinatal health professionals about healthy behaviors.

Key messages:

- Pregnant women don't know all sources of exposure to chemical substances.
- Training in environmental health must be increased for perinatal health professionals.

Effect of smoking behaviour before and during pregnancy on Low head circumference at birth

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Background:

Smoking during pregnancy leads to adverse pregnancy and birth outcomes. Compared to the number of studies on low birth weight, the influence of maternal smoking on low head circumference at birth is not well documented. The aim of the study was to assess an effect of smoking behavior before and during pregnancy on low head circumference at birth.

Methods:

The study is based on the Murmansk County Birth registry. Our study includes women who delivered a singleton pregnancy after 37 weeks of gestation (N = 44,486). Smoking information was self-reported and assessed at the first antenatal visit during pregnancy. Low head circumference was defined in according to the World Health Organization as Mean value minus 2 standard deviations for girls and boys separately. Using logistic regressions we adjusted for maternal age, residence, ethnicity, education, marital status, alcohol abuse, year of delivery, body mass index, pregnancy diabetes, gestational age, and excessive weight gain.

Results:

A dose-response relationship was evident between the number of cigarettes smoked per day during pregnancy and the odds of low head circumference at birth (adjusted OR1-5 cig/day = 1.69 with 95% CI: 1.31-2.19; OR6-10 cig/day = 2.08 with 95% CI: 1.63-2.65; and OR $\geq$ 11 cig/day = 5.19 with 95% CI: 3.89-6.92). Compared to non-smokers, quitting smoking during the first trimester of pregnancy had no significant effect on low head circumference at birth (adjusted ORquitters = 1.04 with 95% CI: 0.80-1.34).

Conclusions:

Despite dose-response relationship was observed between maternal smoking and low head circumference at birth, women who stopped smoking during the first trimester were at no higher risk of having a baby with the low head circumference as compared to non-smokers. Our findings underline a continued need for actions against maternal smoking.

Key messages:

- women who stopped smoking during the first trimester were at no higher risk of having a baby with the low head circumference as compared to non-smokers.
- A dose-response relationship was evident between the number of cigarettes smoked per day during pregnancy and the odds of low head circumference at birth.

Does the over-medicalisation of pregnancy help to improve neonatal outcomes?

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Introduction:

The over-medicalization of pregnancy is frequent, especially in high-income countries and comports unnecessary costs for health systems. In Italy the national health service guarantees access to health care services, but still a lot of pregnant women search for private health care. This study aimed to analyse if the over-medicalization of pregnancy had an impact on neonatal outcomes.

Methods:

The cross-sectional study was conducted in Siena (Italy), data were extracted from medical records. All women that gave birth between January 2016-May 2018 and were classified as ''low/moderate risk'' pregnancy were included. Examined variables were: age, number of obstetrics and ultrasound (US) visits ($\leq$9/$\geq$10), timing of the first visit (<12weeks/>12weeks of pregnancy), health facility (public/private), previous spontaneous abortions (SA) or voluntary interruptions of pregnancy (VIP). The outcome variables were preterm birth (PB) and admission in neonatal intensive therapy unit (NITU). Analysis was performed with Stata 12.

Results:

A total of 2392 women were included; 22% with$\geq$10 obstetrics visits; 19% with$\geq$10 US visits; 87% had the first visit before 12 weeks of pregnancy and 57% were followed by a private healthcare facility. Six percent of babies were born preterm and 11% were admitted in NITU. The PB condition appeared associated with SA (OR:2.4, 95%CI 1.6-3.6 $p < 0.001$) and VIP (OR:1.8, 95%CI 1.2-2.8 $p < 0.005$).

Admission in NITU was associated with previous VIP (OR:1.4, 95%CI 1.01-2.03 $p<0.05$) and PB (OR:2.16 95%CI 1.37-3.41 $p = 0.001$). Multiple logistic regression identified only PB as associated with this outcome.

Conclusions:

Neonatal outcomes do not show association with number of obstetric/US visits and the type of health facility. It seems that controlled pregnancy does not help to reduce the risk of adverse events as premature birth or admission in intensive therapy.

Key messages:

- The over-medicalization of pregnancy is frequent, especially in high-income countries and it has an important impact on health-related costs.
- More controlled pregnancy does not help to reduce the risk of adverse events as preterm birth and necessity of recovery in neonatal intensive therapy unit.

Maternal dietary patterns during early pregnancy and birth weight in Japan

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Background:

The average birth weight in Japan has decreased by 200 g in the last 40 years. Only three studies were reported for the association between maternal dietary patterns and birth weight in East Asia, whose results were inconsistent. We examined what maternal dietary patterns were associated with the birth weight in Japan.

Methods:

Totally 22,493 pregnant women were recruited between July 2013 and September 2016 into the Tohoku Medical Megabank Project Birth and Three-Generation Cohort Study. We included 17,287 women who had a full-term single healthy baby into the analysis. Consumption of food and beverage items was evaluated based on food frequency questionnaire at the first-trimester. Dietary patterns were analyzed using a machine learning method of k-means clustering algorithm. Birth weight was obtained from the medical record. The association between dietary patterns and birth weight was analyzed using multiple liner regression model adjusted for potential confounders with multiple imputation method for missing values.

Results:

Dietary patterns were classified into seven groups by cluster analysis: ''high in rice (reference) ($n = 8046$)'', ''middle in vegetables, beans, mushrooms, seaweeds and miso-soup ($n = 4842$)'', ''high in fruits ($n = 1176$)'', ''high in bread, dairy and alcohol ($n = 1091$)'', ''high in meat and fish ($n = 1049$)'', ''high in coffee, black tea, soft drinks and confections (high in coffee) ($n = 585$)'', and ''high in vegetables, beans, mushrooms, seaweeds and miso-soup ($n = 498$)'' groups. In multiple liner regression models, birth weight was 22.6 g (95%CI: 0.1 to 45.2 g) heavier in ''high in fruits'' group than in reference group and 39.4 g (95%CI: 8.6 to 70.3 g) lighter in ''high in coffee'' group than in reference group. The other groups were not statistically significant.

Conclusions:

High consumption of fruits and high consumption of coffee, black tea, soft drinks and confections during early pregnancy were associated with increased and decreased birth weight, respectively.

Key messages:

- We found maternal dietary patterns during early pregnancy using a machine learning method of k-means clustering algorithm.
- We found maternal dietary patterns which associated with the birth weight in Japan.

Capacity Building in Nurturing Care in Serbia

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Background:

Training program for home visitors on early child development was developed and implemented within UNICEF supported projects involving 25 primary health centers. Training content was notably based on resource modules ''Supporting Families for Nurturing Care'', adapted according to the local context. Health professionals are seen as the critical actors to support development of young children and their families. Family-centered approach that addresses social as well as medical dimensions of problems became priority in their practice with a special focus on working with children from socially deprived settings and children with disabilities.

Objectives:

The main objective was to improve knowledge and practice of home visitors on early child development based on most recent scientific evidence. Broad spectrum of topics was covered including engaging fathers, early detection of postpartum depression, attachment, developmental monitoring, age-appropriate play, home safety, stigma and discrimination. Training were organized as interactive face to face sessions and online courses and attendees were actively engaged in reflection. Comprehensive check list with various assessment instruments was developed to provide guidance to home visitors in implementation of gained skills.

Results:

Increase in knowledge of 150 home visitors was between 57.6% and 82.9%. Enhanced knowledge and skills have been applied in 14912 families of which socially deprived was 34.5% during 2-year period of implementation. Parent-child interactions, assessed by visiting nurses, were improved by 32.6%, responsive feeding practices by 27.4%, while age-appropriate play by 34.4% after interventions during home visits.

Conclusions:

Well-developed monitoring system was crucial for implementation of gained knowledge and skills in practice of home visitors.

Key messages:

- Home visitors were empowered to take a strengths-based approach in their work with families.
- Developed tools facilitated prioritization of most vulnerable families and tailoring support according to needs.

Breastfeeding-related social media: an online survey of UK mothers' perceptions

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Background:

Breastfeeding is beneficial for both maternal and infant health, contributing to reduced risk of infections and chronic disease. Despite public health efforts, just 1% of mother-infant dyads in the UK meet international recommendations to breastfeed exclusively until six months. Numerous studies have investigated the influences on suboptimal breastfeeding rates, exposing a myriad of interconnected physiological, psychological and social barriers. Conversely, social support has been shown to be positively associated with breastfeeding duration. The objective of this study was to determine whether and how

UK mothers use social media to access breastfeeding advice and support.

Methods:

An online survey was developed, piloted and distributed via social media using a snowball sampling approach. Responses to closed questions were analysed using SPSS and appropriate statistical tests performed. Free-text responses were analysed manually using thematic analysis.

Results:

The survey was completed by 1012 mothers, with 992 (98%) reporting use of social media for breastfeeding advice and/or support. Responses revealed a largely positive perception of breastfeeding-related social media. Supportive peer networks and easily accessible information were highlighted as unique features that help to encourage and normalise breastfeeding. Non-university educated mothers were significantly more likely to report this support as ‘‘very influential’’ with regard to how comfortable they felt breastfeeding in public (p = 0.006). Peer-led groups were preferentially used over professional-led groups, particularly by younger women (p = 0.007).

Conclusions:

There is growing interest in social media as a health platform, particularly in light of recent funding cuts impacting on access to formal support services. By supporting mothers and normalising breastfeeding, social media may help to increase UK breastfeeding rates and reduce health inequalities.

Key messages:

- Many mothers successfully use breastfeeding-related social media for information and support, with a preference for peer-led as opposed to professional-led groups.
- Future research should explore how public health services can update their practice to better harness these platforms for breastfeeding promotion.

6.S. Environmental health

Monitoring air pollution effects on children for supporting public health policies (MAPEC_LIFE study)

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Background:

Children are at high risk of suffering health consequences of air pollution and childhood exposure can increase the risk of developing chronic diseases in adulthood. The MAPEC_LIFE project, funded by EU Life+ Programme (LIFE12 ENV/IT/000614), aimed to evaluate the association between air pollution exposure and biomarkers of early effect in children and to propose guidance for implementing environmental policies.

Methods:

The study was carried out on 6-8-year-old children. Micronucleus (MN) frequency was investigated in buccal cells of children and its association with air pollution exposure was assessed applying multiple Poisson regression mixed models, including socio-demographic and lifestyle factors as confounders. We also dichotomize air pollutants concentration according to the EU Ambient Air Quality Directives and WHO Air Quality Guidelines in all Poisson regression models to assess their risk predictive capacity.

Results:

The project involved 1149 children providing buccal cells in winter and spring. 2139 biological samples were included in the analysis (1093 collected in winter, 1046 in spring). The analysis of the association between MN frequency and air quality parameters found positive associations for PM10, PM2.5, benzene, SO2 and ozone. Considering EU Directives, an association was found between MN frequency and PM10 exposure higher than the annual limit value, with an increase of the risk of 17.9% (95%CIs: 0.6-38.1%). Considering WHO Guidelines, the exposures to levels of PM10, benzene and BaP higher than the annual limits were associated with MN frequency, with a risk increase of 22.5%, 27.8% and 59.8% (95%CIs: 3.9-44.3%, 3.8-57.3%, 21.0-111.1%), respectively.

Conclusions:

The analyses conducted showed an association between MN frequency in buccal cells of children and levels of some air pollutants, even at concentration below EU and WHO thresholds, which hence seemed to be insufficient for protecting children from this type of damage.

Key messages:

- Air pollution exposure induced chromosomal damage in buccal cells of children, even at concentration below the law limits.
- Early biological damage detected might be predictive of the occurrence of future harmful effects in humans, at a population level.

Neighborhood disparities in stroke and socioeconomic, urban-rural factors using stroke registry

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Introduction:

Despite major improvements in management over recent decades, stroke remains a devastating disease in Europe and geographic disparities persist. Determining the spatial distribution of stroke may be useful for both epidemiological research and health services planning. The aim of this study was to estimate stroke incidence rates in Pays de Brest (Western France) and to explore the presence of geographic clusters associated with socioeconomic and urban-rural characteristics.

Methods:

The study included incidence stroke cases aged 60 years and more from the Stroke Brest registry for the period 2008 to 2013 aggregated at the census block level. Poisson and negative binomial regression models were used to explore determinants of disease risk. Geographically weighted regression (GWR) was used to allow estimation of local regression coefficients.

Results:

Between 2008 and 2013, 3088 cases aged 60 years were identified in Pays de Brest. The incidence of stroke was 6.67 per 1 000 inhabitants. Living in a rural neighborhood with a higher level of blue collar and of farmer was associated with higher age adjusted stroke incidence rate ratio (IRR) 1.23, [95%CI 1.09-1.39]. Higher risk was also found in a city center neighborhood with a higher level of blue [IRR 1.22, 95%CI 1.04-1.49]. Local Poisson GWR models achieved the best fit and suggested evidence of spatially varying regression coefficients and clusters of higher incidence.

Conclusions:

Our study contributes to a better understanding of the relationship between stroke risks and contextual characteristics such as socioeconomic circumstances and urban rural setting. This will help targeting areas for specific public health prevention.

Key messages:

- Variations of stroke were marked according to socioeconomic and urban-rural setting of the living area.
- This study will help targeting areas for specific public health prevention.

Individual and process factors influencing user's satisfaction with Housing First services

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Objectives:

Housing First models aim to give homeless with severe drugs and mental health problems a permanent home and assertive care team support. Concern persists that user satisfaction and retention rate are key values in the evaluation of such inclusive-care programs, to secure good outcomes. The aims of this study were 1) to explore user's satisfaction with Housing First services, and 2) to determine individual or contextual factors influencing user's satisfaction.

Methods:

Based on the French Un Chez Soi d'Abord sample, we analysed data from homeless people with severe mental problems assigned to the Housing First and followed during 3 years. Measures included team tracking frequency, service users' needs, and a Client Satisfaction Questionnaire (CSQ-8). Generalized estimating equations were used with a random effect for site to identify relevant baseline confounders for the CSQ score.

Results:

At 36-month follow-up, 131 HF participants completed the services user's needs and CSQ-8 questionnaires. 94% were still housed. Respondents reported needs from the HF team for managing housing (74%), administrative assistance (63%) and mental illness (43%). The mean total CSQ-8 score was 25.6 (SD = 5.2) out of 32. Four predictors of a higher CSQ score were: higher frequency of visits (regression coefficients 8.2), lower user's education (-2.2), ever been a tenant (1.4), and suffering of schizophrenia disorder (0.9) (p<.001).

Conclusions:

The users' perception of the quality of HF services appears to be high. Our results underscore the interaction of individual and process factors influencing user satisfaction. These findings suggested that HF intervention in France is a promising strategy for high quality of services to homeless people with mental illness.

Key messages:

- He users' perception of the quality of Housing First services appears to be high.
- Housing First intervention in France is a promising strategy for high quality of services to homeless people with mental illness.

Comprehensive unhealthy lifestyle is associated with alcohol consumption as J-shaped curve

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Background:

Alcohol consumption is a confirmed risk factor for cancer as well as cardiovascular and other diseases. Decreased and increased risks with light and heavy consumption, respectively (J-shaped associations), were reported for total mortality. However, whether alcohol itself or its related-factors are involved in this association, is unclear. This study examined the background characteristics of comprehensive lifestyles and clinical factors according to alcohol consumption, using data from a baseline survey of large-scaled cohort study conducted among the general Japanese using Breslow's healthy lifestyle index.

Methods:

The study subjects were 23,885 males and 28,165 females aged 35 to 69 years, who were enrolled in the Japan Multi-Institutional Collaborative Cohort (J-MICC) Study. To determine unhealthy lifestyle scores, smoking, exercise, sleeping duration, breakfast consumption, eating between meals, and obesity were combined. The odds ratios (ORs) of unhealthy lifestyles and clinical factors according to alcohol consumption were estimated using a logistic regression model.

Results:

The ORs of combined unhealthy lifestyles decreased among light drinkers in males (0.73, 0.67-0.80) and females (0.88, 0.82-0.95), and increased among heavy drinkers (1.52, 1.27-1.83; 2.15, 1.44-3.20, respectively). These associations were not found for each unhealthy lifestyle and atherosclerosis-related factors, except for less breakfast intake in males and less frequent habitual exercise in females.

Conclusions:

The present study suggests that the J-shaped association between comprehensive unhealthy lifestyle and alcohol consumption may be an important background factor of the association between alcohol consumption and risk of total mortality. Further study for total mortality with them is warranted.

Key messages:

- This study showed comprehensive unhealthy lifestyles were observed not only among heavy drinkers, but also among non-drinkers.
- Light drinkers have more healthy lifestyles, which contribute to their better health.

Prenatal exposure of extra vitamin D from fortification and later risk of inflammatory bowel disease

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Introduction:

Inflammatory bowel disease (IBD) is a chronic immune-mediated inflammatory disease that can affect the entire digestive tract. Approximately 1% of the Danish population has IBD today. Both the incidence and prevalence of IBD are increasing globally, but the etiology of IBD is still not fully understood. Some, but not all studies find that vitamin D has both protective and therapeutic effects on IBD. To our knowledge, no other study has investigated prenatal exposure to extra vitamin D from either fortified food, diet or supplements in relation to IBD. The aim of this study was to investigate whether a small extra dose of vitamin D from fortification during gestation, was associated with a lower risk of developing IBD in the offspring.

Methods:

In 1985 mandatory fortification of margarine with vitamin D in Denmark was canceled. To investigate the effect of this policy change we selected all individuals from 2 full year birth cohorts before and after the termination of the mandatory fortification. All individuals were followed for 30 years. By merging data from the Medical Birth Registry with the Danish National Patient Registry, we identified individuals with IBD.

Results:

217,249 individuals were included in the analysis. 875 among the exposed and 1102 among the unexposed fulfilled the criteria for being diagnosed with IBD. A lower odds ratio OR = 0.867 (95% CI: 0.792;0.947) for IBD was observed among those who had been exposed to extra vitamin D from fortified margarine during gestation, compared to those who had not been exposed. The analysis was adjusted for sex and season of birth, but results were essentially similar before and after this adjustment.

Conclusions:

This study shows, that a small extra dose of vitamin D from fortified margarine during gestation may lower the risk of developing IBD in the offspring, until the age of 30. If these results can be replicated, fortification with vitamin D could be recommended to prevent IBD on a public level.

Key messages:

- Prenatal exposure of vitamin D from fortified food could lower the risk of IBD later in life.
- Fortification with vitamin D even at a relatively low level could have public health benefits.

Individual-level high definition spatial distribution of mammography uptake in Geneva (Switzerland)

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Background:

The local social and physical environment influences health outcomes and individual behaviour. It remains unknown if the environmental influence is independent of individual socioeconomic status (SES). We studied the spatial distribution of mammography screening uptake in the Swiss urban population of Geneva and determined its independence from SES.

Methods:

We used individual-level geo-referenced data (n = 5 002) from the participants in the Bus Santé study, a population-based cross-sectional study ongoing in Geneva since 1992. Data from 1992 to 2014 have been included in this study. Local indicators of spatial association (LISA) were calculated and used to assess the spatial dependence of mammography uptake (defined as having had a mammography in the past). We report unadjusted spatial clusters; adjusted for neighbourhood income and individual educational attainment; and for demographic variables (age and Swiss nationality). Furthermore, we evaluated the association between the distance to the nearest screening centre and the identified spatial clusters.

Results:

Mammography uptake was not randomly distributed, with spatial clusters overlapping with those of SES. Spatial clusters were reduced to 56.2% of their initial size (n = 1,033) after adjustment for SES variables. Adjustment for age and nationality further reduced the proportion of individuals exhibiting spatially-dependent behaviour (to 36.5% of the initial size). Distance to the nearest screening centre was not associated with the spatial distribution of mammography uptake.

Conclusions:

High definition spatial distribution studies using analysis of individual data allow identifying spatial clusters which are not based on pre-determined administrative units (e.g. postal code) but rather on individual behaviour. Persistent spatial clusters after adjustment for SES and demographic confounders suggest additional area-level determinants influencing the spatial distribution of mammography uptake.

Key messages:

- High definition spatial studies can help uncover new patterns of health outcomes distribution independent of SES and based on individual behaviour, rather than administrative units.
- While SES explains a great proportion of the spatial distribution of mammography uptake, other still elusive factors may be contributing to the observed spatial inequalities in mammography uptake.

Prognostic and Predictive biomarkers in a Mediterranean cohort (Review from Atena Project)

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Background:

Atena project involved 5,062 women aged 30 to 69 years living in the area of Naples. The purpose of this study is to investigate the causes of those chronic diseases that have a major impact on the female population. As a part of the design (scheduled in 2002-2004). After 10 years, in 228 women, some biochemical measurements were performed.

Methods:

This systematic review and meta-analysis biomarkers were evaluated in studies nested into the Atena cohort. Studies were searched using MEDLINE/PubMed. The search was performed by entering individually or in combination: Atena, Mediterranean woman, biomarkers. The preferred reporting of systematic reviews and meta-analysis (PRISMA) guidelines were used for the review. Studies selected for this review are conducted in the Atena project Cohort and reported the study of biomarkers. Disagreements on data extractions between the two investigators were solved by consensus. The extracted data were entered and analyzed using REVMAN software. The original articles were described using forest plot and table. Heterogeneity was computed by Cochran's Q test.

Results:

The search strategy retrieved 13 potential articles, 11 were screened as full text articles and 6 were included in the pooled estimates. Among the articles included, biomarkers chosen as predictors were Lipids, Hcrp, as prognostic where predictive of IMT; and cycle length and LPa as predictive of an augmented LDL cholesterol mean. According to the comparability of data presented, for the first comparison we selected 3 of the 5 studies that assed IMT, for the second we selected 2 of the three studies that analyzed for LDL mean. Results were shown into forrest plots. The pooled estimates verified the potential of biomarkers as predictor of IMT, the significance seemed lower for prediction of LDL cholesterol.

Conclusions:

Both results, consistent with the multifactor profile of the CV risk, identify the impact of secondary prevention according to biochemical profiles.

Key messages:

- Biomarkers studied in nested cohort stufies have predictive potential.
- pooled estimates may identify the impact of secondary prevention according to biochemical profiles.

Against lead poisoning: effectiveness of housing first and counselling in the home

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Background:

Removing lead sources is the main measure against child lead poisoning. Medical treatment is ineffective for most mild cases and particularly against long-term complications in neurological development. However, the effectiveness of interventions to eliminate sources of lead exposure has not been fully established, mainly because of the diversity of situations. The objective of this study was to determine the influence of several interventions (housing counselling, rehabilitation and relocation) on blood lead levels in two situations (stable unhealthy housing with old flaked lead paints, slums with family recycling practices by incineration).

Methodology:

A historical cohort of lead poisoning in children has been established in Marseille, France. Medical follow-up followed national guidelines. Environmental interventions followed legal procedures, where available. In slums, counselling was adapted to the exposure. A generalized mixed model was developed to study the kinetics of blood lead levels after the interventions.

Results:

151 children were included; age = 5.4 (SD = 7.8) years; 85 (56%) lived in stable unhealthy housing, others lived in slums. Medical follow-up included 492 blood lead levels. For children living in stable unhealthy housing, blood lead level decrease was significantly associated with every intervention: housing counselling, rehabilitation and relocation (respectively $p < 0.005$; $p < 0.05$ and $p < 0.005$). For children living in slums, blood lead level decrease was only associated with relocation in a stable housing ($p < 0.005$).

Conclusions:

Several interventions are effective to decrease blood lead levels in unhealthy housing. In slums, access to a stable housing first is a prerequisite for any intervention against child lead poisoning, even when related to family practices.

Key messages:

- In stable unhealthy housing, several interventions against lead exposure can be effective to raise a strategy.
- But, environmental health and access to housing first needs to be addressed for their implementation.

7.R. Health systems and economics

The Public Health Implications of Brexit: A Health Impact Assessment Approach

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On March 29th 2019, the United Kingdom (UK) was due to exit the EU in a process known informally as 'Brexit'. This exit and entry into a 2-year transition is a period of unprecedented political and social upheaval - with many unknowns and much uncertainty attached to the outcomes and future impact.

In preparation for Brexit, Public Health Wales commissioned the Wales HIA Support Unit to carry out a health impact assessment of Brexit in Wales to support and inform its and other public bodies planning and future work.

This paper examines the unique HIA carried out between July and December 2018 on the impact of the UK withdrawal from the EU in Wales. It discusses the robust, participatory process undertaken, the stakeholders involved and the benefits reaped from this. It highlights the evidence gathered and analysed including the collection methods, the complex nature of the work and disseminates the main findings from the HIA including the potential determinants of health and population groups identified.

Finally, it describes the challenges faced, how these were overcome, and the huge benefits, impact and influence it has had to date across a wide range of UK and Welsh organisations and public bodies. This work demonstrates continued leadership in the field of impact assessment and spearheads the requirement for public bodies to carry out HIAs as part of the forthcoming statutory requirements of the Public Health (Wales) Act 2017 an can inform practice at a global level.

Key messages:

- HIA can inform and influence action in response to important strategic decisions.
- The Brexit HIA is a unique example which can inform international HIA practice.

Unpaid carer inequalities: a public health concern

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The number of unpaid carers is rising globally and is anticipated to grow given predictions on life expectancy, morbidities and limitations on care alternatives. The estimated number in England is 5.5 million. Significant international evidence exists of potential negative impact on employment, health and wellbeing which have individual and societal consequences. This presents a major public health concern, especially as much of the experience and health consequences remain a largely hidden issue.

Drawing on two doctoral studies undertaken in the UK we expose the potential for significant health and social inequalities to be experienced by unpaid carers and offer models to enhance understanding and potentially more effective responses. The presenting author provided supervision and continues to research the topic.

Both studies were set in a translational paradigm to maximise timely utility. The experiences of the participants were privileged while attempting to ensure that the clinical, education and policy potential of the research was incorporated. Study participants were care givers for family members with life limiting illnesses, principally cancers and dementia. Qualitative methodologies were employed in both studies; one drawing significantly on realist approaches and the other on grounded theory.

There is generally a lack of consensus concerning when and how carers can best be supported. Although some support interventions were valued there are some fundamental tensions in service models which limit their potential. Specifically the centrality of the relationship is needs to be acknowledged and nurtured. Often, professionals often predominately draw on a medical model as the default intervention position when attempt to tackle carers' health inequalities. These findings suggest that greater attention should be afforded to the potential of social coping strategies to create a more enabling rather than burden dominated perspective.

Key messages:

- unpaid (family)carers are at risk of being exposed to a range of health inequalities which can have individual and societal consequences.
- Interventions that acknowledge the relationship and draw on social dimensions may off coping may offer effective ways forward.

Shifting the Gravity of Spending: Assessing the impact of PHE's Prioritisation Framework

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Background:

Findings are presented from the evaluation of Public Health England's (PHE) new Prioritisation Framework (PF) conducted between September 2017 and December 2018 aimed to help local authority commissioners with their public health investment and disinvestment decisions. The study explored the take up of the PF in three early adopter local authority settings.

Methods:

Data collection was based on semi-structured interviews (n = 30) across three local authorities supplemented by participant observation of workshops and data concerning the implementation process as well as spend and outcomes both before and, where possible, after using the PF.

Results:

Participants acknowledged that the PF provided a systematic way to guide prioritisation decisions and one that encouraged transparency over investment and disinvestment decisions. The role performed by PHE and its regional teams in facilitating the process was especially welcomed and considered to be critical to the adoption process. However, uptake of the PF required a significant investment of time and commitment from public health teams at a time when resources were stretched. The impact of the political environment in local government was a major factor determining the likely uptake of the PF. Ensuring committed leadership and engagement from senior politicians and officers was regarded as critical to success.

Conclusions:

The study assessed the value of the PF and the processes surrounding its implementation and use. Further research could further explore the value of the tool in aiding investment and disinvestment decisions and its impact on spending.

Key messages:

- The PF provides a platform for engaged and informed deliberation about priorities and does so in an open, structured and transparent manner.
- Organisational and political context in which prioritisation occur shape the adoption of the PF tool.

Determinants of frequent use of primary care in the German healthcare system

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Background:

In Germany, patients are consulting general practitioners increasingly frequently, resulting in a high burden on the healthcare system. This study aimed to identify factors associated with frequent primary care attendance in the German healthcare system.

Methods:

The German Health Interview and Examination Survey for Adults (DEGS) is part of Germany's national health monitoring, and includes a large representative sample of the German population aged 18-79 years. We defined the 10% of participants with the highest number of physician contacts in the preceding 12 months as frequent attenders. Binary logistic regression models with average marginal effects were used to identify determinants for the frequent use of primary care services.

Results:

The sample comprised 7,956 participants. Significant effects on frequent use of primary care were observed for low socio-economic status, stressful life events, and factors related to objective need for medical care and subjective health status. In the full model, the number of non-communicable diseases and subjective health status had the strongest effect on frequent primary care use. We found an interaction effect between subjective health status and number of non-communicable diseases, indicating the association of disease with frequent use was highly moderated by subjective perception of health.

Conclusions:

We observed strong associations between frequent primary care attendance and objective and subjective health-related factors. These findings suggest that better coordination of care may be a preferred method to manage health services utilization behaviour and avoid redundant examinations and uncoordinated clinical pathways. Further research is needed to clarify moderating and mediating factors contributing to high utilization of primary care services.

Key messages:

- The number of NCDs diseases and subjective health had the strongest effect on frequent primary care use.
- The findings suggest that better coordination of care may be the preferred method to manage health services utilization.

Does the take up of public insurance programs improves health care consumption of poor individuals?

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Background:

The French health insurance system is universal but 95% of the population is also covered by a complementary private health insurance (CHI). The CHI take up is not uniform across the income distribution and health care access is partly conditioned by its coverage. The Complementary Universal Health Coverage (CMU-C) and the Health Insurance Vouchers Scheme (ACS) are mean tested programs providing CHI to the poor. The former is free while the latter takes the form of a voucher to buy private CHI. Our objective is to study and compare the evolution of health care use and consumption associated with the take up of the CMU-C or the ACS.

Methods:

In a nationwide cohort of ACS and CMU-C beneficiaries we compute bi-annual expenditures, out of pockets expenditures and rates of use for different types of care: outpatient, inpatient, dental, optical and audiology. We use panel data regression methods to model the evolution of health care use and expenditures before, during and after the coverage periods of both programs.

Results:

Our population is composed with about 10 million individuals benefiting at least once from either the ACS or the CMU-C on the 2012-2017 period. Preliminary results suggest that inpatient expenditures are increasing concomitantly with the take up of any program whereas outpatient expenditures tend to increase after. Results will be provided for the conference on the variations of the consumption according to the program

(CMU-C or ACS), type of care, individual characteristics and health status.

Conclusions:

Free or subsidized complementary health insurance may play an important role in the access to care for poor population, even in the presence of mandatory coverage. The take up of complementary health insurance for the poor population could be partly driven by the use of inpatient services but coverage may impact positively outpatient expenditures.

Key messages:

- Unlocking poor individuals financial constraint tends to increase their use of medical services.
- Generous insurance coverage targeting financially constrained individuals could be a tool to reduce health care use inequalities.

Evaluation of polypharmacy in Japan using the national health insurance claims database in 2015-2017

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Background:

There is growing awareness of polypharmacy as a global issue. Several countries have introduced policies to optimize multidrug prescriptions. In Japan, hospital prescription fee ‘‘F100’’ and outpatient prescription fee ‘‘F400’’ have been instituted to promote the correct use of drugs, the medical treatment fee is restricted when seven or more types of drugs are prescribed. However, non-polypharmacy patients who need multiple drugs are also comprehensively evaluated within the purview of the same drug insurance claim criteria. Thus, the current state of such policies is still unclear. This study identified the age group in which drug claims have changed based on drug insurance claim criteria and elucidated the relationship between policy interventions and multidrug prescriptions.

Methods:

We analyzed F100 and F400 cases using open data from the National Database of Health Insurance Claims and Specific Health Checkups of Japan from April 2015 to March 2017. These sources include a population of about 69 million patients. Moreover, the growth rate of the number of patients who were prescribed seven or more types of drugs was evaluated.

Results:

F100 prescription claims decreased by − 12.7% (n = 3,239,070) in 2016 as compared to 2015 (n = 3,700,396), and the number of F400 prescription claims decreased by − 7.7% (n = 28,745,468) in 2016 as compared to 2015 (n = 31,142,484), for seven or more types of drugs. The drug insurance claim rate among people over the age of 65 was 74.2% to F100 and 77.9% to F400, and this age group represented the highest proportion among all age groups.

Conclusions:

The rate of health insurance claims for multidrug prescriptions clearly decreased after the institution of policy interventions to optimize the use of seven or more types of drugs. The present study suggests that the prescription fee restriction could reduce the rate of multidrug prescriptions and consequent decreases the risk of adverse drug-related events in polypharmacy patients.

Key messages:

- Policy interventions related to the optimization of drug prescriptions encourage behavioral factors of healthcare providers.
- Polypharmacy treatment must be established through prescriptions information linkage between clinical practices and community.

Unmet dental health care needs among adults in Serbia, Survey on Income and Living Conditions 2017

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Background:

Changes in the health insurance law in 2005 led to the changes in the organization of the provision of dental health care in Serbia. Prior to this law, dental health care was available for every resident covered by mandatory health insurance without additional out-of-pocket payments. Now the dental health care is available only for children under the age of 18, students under the age of 26, pregnant women and for emergency dental care. The aim of this study was to assess the prevalence of unmet dental health care needs among adults and to assess the factors associated with unmet dental health care needs.

Methods:

The study was the secondary analysis of the data from the Survey on income and Living conditions in Serbia, conducted during 2017. Multivariate logistic regression analysis was used to assess the association of unmet dental health care needs and socio-demographic and socio-economic factors.

Results:

Total of 1718/12437 (12.1%) adults reported unmet dental health care needs. The main reason reported was not being able to afford it (1014/1718, 59.0%), along with the fear of doctors or hospitals (260/1718, 15.5%). Multivariate logistic regression analysis showed the association of unmet dental health care needs and being employed (OR: 1.50, 95% CI: 1.24-1.80), unemployed (OR: 1.96, 95% CI: 1.65-2.33), having primary (OR: 1.47, 95% CI: 1.16-1.86), or secondary education (OR: 1.43, 95% CI: 1.21-1.69), being divorced (OR: 1.47, 95% CI: 1.17-1.85), having good (OR:1.44, 95% CI: 1.20- 1.74), average (OR: 2.36, 95% CI: 1.91-2.92), poor (OR: 2.29, 95%CI: 1.77-2.97), or very poor general health (OR: 2.42, 95% CI: 1.68-3.48), having limitation in daily activities (OR: 0.66, 95% CI: 0.60-0.77) and being materially deprived (OR: 1.67, 95% CI: 1.46-1.90).

Conclusions:

The prevalence of unmet dental health care needs in high among adults in Serbia. There is an association between social characteristics and health status with unmet dental health care needs in Serbia.

Key messages:

- There is a high prevalence of unmet dental health care needs in Serbia.
- Unmet dental health care needs are associated with social characteristics and health status.

Atlases of variation for elective surgery to tackle wasteful care

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Background:

In 2017, the OECD suggested robust information systems as one of five measures to tackle wasteful care. Atlases of variation identify variations that may not be medically justified. The aim of this study was twofold: 1. to identify atlases that target variations in the provision of elective surgery and 2. to analyse the interventions that have been addressed.

Methods:

We conducted an online search for atlases of variation on websites and by a selective literature search in PubMed. When necessary, we contacted public health institutes to retrieve further information. We included online and/or paper-based atlases that analysed data on elective surgery. Other atlases (e.g., epidemiological) were excluded. We transferred basic (e.g., on country, language and methods) and specific information on analysed interventions into a predefined data extraction scheme.

Results:

We identified 12 international atlases that fulfilled our inclusion criteria (2 from Germany, 1 from Belgium, France, Great Britain, Norway, The Netherlands, Switzerland, Spain, Australia, New Zealand and the US). In addition to reports/factsheets, 9 atlases provide additional interactive online applications. In total, about 70 different surgical interventions have been analysed, most often the following: Interventions to treat diseases of the musculoskeletal system (11 atlases: e.g.; knee (9), hip (7) and spinal (4) surgery), diseases of the digestive system (9 atlases: e.g., appendectomy (6), cholecystectomy (6), bariatric surgery (4)), diseases of the genitourinary system (8 atlases: e.g., prostatectomy (6), hysterectomy (5)), caesarean sections (8 atlases).

Conclusions:

Despite the large number of interventions, their pattern of analyses might point out known problem areas across countries. Atlases of variations cannot solve the problem of inappropriate care, but help prioritise areas of actions with the greatest need and the best chances to improve the quality of care.

Key messages:

- Atlases are commonly used to provide publicly available information on variations in elective surgery.
- The analysis of interventions across countries provides information on potentially most relevant areas.

Pay for performance scheme for general practitioners in France: results in 2018

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Methods:

A pay-for-performance scheme, known as Remuneration on public health objectives (ROSP) and based on meeting targets on quality and efficiency indicators, was introduced for general practitioners in France in 2012. Since 2017, following the 2016 medical agreement between Health Insurance and doctors' unions, ROSP has consisted of 29 indicators: 8 about chronic disease management, 12 about prevention and 9 about appropriate and efficient prescriptions. The aim of this work was to describe the 2018 results and the overall evolution of the indicators for office-based practitioners. Data are from the French national health system database.

Results:

Follow-up of diabetic patients is steady: diabetic retinopathy screening and regular HbA1c measurement have been performed in 63% and 79% of them since 2016, respectively. Screening for chronic kidney disease improved for diabetic patients (29% in 2015 to 39% in 2018) and hypertensive patients (6% to 11%) but remain low. Influenza vaccination among people over 65 years increased in 2018 (55%) while a downward trend has been observed since 2011 (58% in 2011, 53% in 2016). The number of antibiotic treatments has decreased since 2011, from 46 out of 100 adults without long-term disease to 36 in 2018. In contrast, breast cancer and cervical cancer screening indicators have stagnated for several years around 66% and 56%, respectively. In terms of efficiency, all the indicators improved, most of them consisting in biosimilar and generic drugs prescription. By 2018, ROSP represents 3% of doctors' revenue (including fee-for-service and lump sum payments).

Conclusions:

By promoting prevention, better management of chronic diseases and optimizing prescriptions in relation to standards, ROSP indicators contribute to improve medical practices. The indicators need to be regularly updated to take into account the evolution of practices and recommendations.

Key messages:

- By promoting prevention, better management of chronic diseases and optimizing prescriptions in relation to standards, ROSP indicators contribute to improve medical practices.
- The indicators need to be regularly updated to take into account the evolution of practices and recommendations.

Cost-effectiveness analysis of the Un Chez Soi d'Abord randomized controlled trial: a Markov model

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Objectives:

Providing permanent supported housing (rent subsidies), integrating clinical and social services to homeless people may represent a financial barrier for building a healthier European public policy. Our objective was to conduct a cost-effectiveness analysis of the French Housing First program.

Design and methods:

Between 2011 and 2014, homeless people with severe mental illness from 4 French major cities were randomized to Housing First (HF, n = 353) or Treatment as Usual (TAU, n = 350) and followed over 24 months. Housing stability and survival were assessed. Costs incurred by health (ED visits, hospital admissions, physician consultations), social (shelters, supported accommodations, other residential structures), justice services (court appearances, detention and penitentiary centres), and welfare benefits were collected over 24 months. Markov models of 6-month transition probabilities were compared among HF group (offering an independent house and support from outpatient mental health and social team) and TAU group (receiving pre-existing dedicated homeless-targeted programs and services). Three Markov states were defined: stable housing (at least 90 nights in an independent housing), unstable housing (i.e. inverse) and death. A societal perspective and a life-time horizon were chosen. Robust sensitivity analyses were performed, including Tornado diagram and Monte-Carlo simulations.

Results:

There is evidence of changes (P<.001) in housing stability (246% more days housed) for the HF group compared with TAU group. From the societal perspective, HF was €10,163 (3%) more costly than usual care. ICER was €5.32 per additional night spent in independent housing. In sensitivity analyses, HF was less costly and more effective in 28% of iterations.

Conclusions:

HF proves to be cost-effective in homeless people with mental disorders and may assist decision-makers in defining conditions for further implementation of these innovations in Europe.

Key messages:

- Housing First model proves to be cost-effective in homeless people with mental disorders.
- Housing First model was less costly and more effective in 28% of ieration compared to treatment as usual.

Mathematical modeling of medical equipment needs for public health purposes

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Issue:

A public health challenge facing many developing countries is the lack of medical equipment, such as mammograms and CT scanners, as well as the unequal access to available equipment. In order to rationalize costs and provide patients with more equal access to preventive and diagnostic services, optimized distribution based on actual needs, considering factors such as population structure and private sector capacities is necessary. The suggested optimization was made in cooperation between students of public health, applied mathematics, and information technology.

Description of the problem:

Based on Open data released by the institutions of Republic of Serbia, pertaining to radiological equipment operated by state healthcare facilities over a period of three years (2015, 2016 and 2017) and projected population, by sex, age, and region, a mathematical model has been made, aimed at optimizing equipment distribution across the 4 regions. With the goal of finding an adequate model, region and year specific data were used for calculating the Gini coefficient. Multiple alternatives were tested over a period of a few months, with the results displayed graphically, using a web application presenting the equipment distribution.

Results:

In maximizing the territory covered, the availability of the equipment to the patients was increased, and with it, the equipment's utility. The results indicate savings can be achieved, taking into consideration the capacities of the private sector.

Lessons:

An adequate mathematical model can contribute to a better distribution of equipment, as well as cost saving. Taking into consideration that inadequate funding is one of the major challenges faced by state healthcare services worldwide, with appropriate data, the model would find use in other countries as well.

Key messages:

- Open medical data opens up new space for action by the interested parties.
- Inter-professional cooperation holds great potential in solving public health problems.

Economic burden of HIV disease from 2012 to 2017 based on the French national claim database (SNDS)

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Background:

The aim of this study was to assess the economic burden of HIV disease in France, by analyzing structure and trends of expenditure between 2012 and 2017.

Methods:

We identified people with HIV disease among beneficiaries of the health insurance general scheme (covering more than 57 million people, 87% of the French population), applying algorithms combining inpatient and outpatient diagnoses and claims for specific drug treatments or laboratory examinations. The individuals' expenditure (26 different items) reimbursed for hospitalizations, ambulatory care and cash payments were included. A top-down method was used to attribute expenditure to HIV disease based on the average expenditure calculated for individuals with only HIV disease. To analyze trends, we applied the same methodology from 2012 through 2017.

Results:

In 2017, HIV disease was identified for 131 800 individuals (0.2% of the population) and expenditure attributed to HIV disease corresponded to €1.3 billion (1% of the 140.1 billion reimbursed by the general insurance scheme). Drug treatment accounted for 85% of total expenditure reimbursed (1.2 billion). Between 2012 and 2017, the number of HIV patients identified increased steadily (+16,800 patients with an annual growth rate of 2.8%) and expenditure attributed to HIV disease increased by €8 billion. However, annual expenditure growth was variable, as a result of instability in the average annual cost per patient, ranging from 9,700€to 11,100€per year per patient. This reflects changes in practice and drug prices.

Conclusions:

The detailed analysis of expenditures attributed to HIV disease showed that drug treatments account for the large majority of total reimbursements. Annual variation in total expenditure could therefore reflect evolution in prescription practices, such as the extension of treatment indications; or in drug prices, with the availability of combined treatments.

Key messages:

- Drug treatments account for the large majority of total reimbursements among HIV patients.
- Variation in total expenditure attributed to HIV disease is mainly driven by prescription practices and drug prices.

7.S. Infectious diseases control

The recent Italian vaccination law and the role of Local Health Authorities: the case of LHA Roma 1

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Issue/problem:

The increase of vaccine hesitancy is leading to decrease vaccination coverage. In Italy, a new vaccination law was approved in July 2017 to contrast the spread of preventable infections. 10 vaccines became mandatory for children and unaccompanied foreign minors aged 0-16 and provided for free according to the national immunization schedule for each birth cohort. Being vaccinated is now required to attend schools and kindergartens even if a ban for students aged 0-6 or a fine for the other are previewed.

Description of the problem:

According to the law, in Lazio Region, a web platform was realized in May 2018 in order to permit schools to update the list of their pupils. Medical doctors from LHAs had to evaluate continuously the updated lists, verifying the vaccination status of each student in order to approve their enrolment at schools or to recall parents providing counseling about vaccination.

Results:

From August 2018 to March 2019 schools settled in the area of LHA Roma 1 registered 121.687 pupils (among those 105.720 pupils were also resident in the area of LHA Roma 1). After a preliminary check within data already present in the regional vaccination registry, around 30 healthcare operators, from the 6 healthcare districts of LHA Roma 1, were widely involved in order to evaluate pupils' vaccination status. The number of evaluations decreases in the same period from 19.634 to 4921, but 4908 out of these 4921 were pupils not found in the regional vaccination registry, probably for errors in the registration of personal data such as the fiscal code. Some students' families received vaccination counseling.

Lessons:

The web platform realization was an innovative way to monitor vaccination status: it facilitates a further collaboration among schools and LHAs in order to guarantee health in community and to increase awareness about vaccinations and their benefits. A great involvement of schools and healthcare operators was observed.

Key messages:

- Although some problems such as pupils not found in the regional vaccination registry persist, the way of working in a collaborative way addressing community troubles is clearly traced.
- Technology and information systems help community services in monitoring and improving health outcomes. Their use has to be improved and promoted.

Azienda Sanitaria Locale Roma 4: the external evaluation as strategy to improve vaccination services

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Issue:

Azienda Sanitaria Locale (ASL) Roma 4 is one of the ten local healthcare companies of Lazio Region. Vaccination Service (VS), organized in 15 ambulatories, is managed by dedicated and trained staff and this organization has led to high vaccination coverage over the years. In 2017, the National Immunization Plan and the new law on mandatory vaccination required a reshaping of VS. The Health Management of ASL Roma 4 has requested an external evaluation of the VS to a private company (PC) with the aim to highlight weaknesses and strengths.

Description of the problem:

The PC, through inspections and questionnaires addressed to personnel, analysed four features: amplitude of the access to the ambulatory; management of the access; communication; tools. The analysis focused specifically on vaccination for people under 18 years old.

Results:

The PC underlined these weaknesses: massive free access; strong influx of users from other adjacent ASL; computerized vaccination registry not available online; absence of a centralized booking and information request system; lack of targeted use of social networks. Best practices of the VS are: vaccination stocks centrally managed; preventive interview for travellers; structured procedures shared throughout the territory; focused vaccination campaigns; information material sent to the families of the new born; online portal available to users to view their personal data and download vaccination certificates; vaccination counselling; openings dedicated to specific user categories.

Lessons:

The PC suggested these solutions: division of ambulatory opening into free access and booking/active call; online computerized registry; unique call center constitution; creation of official social network pages. ASL Roma 4 activated the unique call center and taken corrective actions for the other weaknesses.

Key messages:

- Best practices can be used in other healthcare setting and the periodically external evaluations can improve the vaccination service.
- Continuously monitoring the activities improves the quality of the vaccination service.

A systematic review of factors influencing pregnant women's future vaccination choices

Annalisa Rosso

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Background:

Over the last years, vaccine hesitancy has been increasing globally, leading to a decrease in vaccination coverage in several Countries, mostly in Europe. Several systematic reviews were conducted to assess the determinants of hesitancy and of vaccination choices, but none of them focused on pregnant women, which would represent an ideal population to promote correct information on vaccines.

Methods:

We conducted a systematic review of studies assessing knowledge and attitudes on paediatric vaccinations, vaccination choices and their determinants among pregnant women. We searched Medline, Scopus and Web of Science, adapting search terms to the different databases, following PRISMA Statement criteria. No time limits were set.

Results:

A total of 5,309 records were retrieved. After duplicates removal and title/abstract selection, 15 full texts were included in the narrative synthesis. Most studies (14/15) were quantitative surveys, 2 focused only on specific vaccines (rotavirus and HPV), 4 studies were conducted in European countries (Germany and Italy). The main factors associated with vaccine hesitancy or refusal were the fear of side effects, in particular for the most recent vaccines, the perception of a greater importance of natural immunity and a low perception of utility of vaccines, the lack of trust in health professionals, having obtained information on vaccines not from a doctor, primiparity and a low level of education (for these two last factors, with inconsistent results between studies).

Conclusions:

Available evidence shows that the perceived risks and importance of vaccinations and the information received during pregnancy can influence vaccination choices of future mothers, and that the determinants of hesitancy may vary in different contexts. Pregnant women represent a key population for the implementation of interventions aimed at increasing knowledge and acceptance of vaccinations, which should be based on an analysis of the specific context.

Key messages:

- The perceived risks and importance of vaccinations and the information received during pregnancy can influence vaccination choices of future mothers.
- Interventions aimed at increasing knowledge and acceptance of vaccinations should be based on an analysis of the specific context.

Are midwives ready to fight vaccine hesitancy? First results from an Italian cross-sectional study

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Background:

Pregnancy is widely recognized as a 'teachable moment' since attitudes and beliefs about childhood vaccines are not completely structured. Among healthcare workers (HCWs), midwives play a pivotal role in the maternal care pathway and should have a key role also in promoting opportunities of discussion and correct information about vaccinations.

Methods:

We conducted a cross-sectional survey to assess knowledge and attitudes of a sample of Italian midwives towards vaccinations. A questionnaire was designed ad hoc and sent electronically to midwives members of the professional register of Rome.

Results:

Preliminary results on data collected from 140 midwives (mean age 37.32, DS ± 11.61; mean years on the job: 11.94 DS ± 12.78) who completed the survey showed a heterogeneous level of knowledge: only 50% of the sample indicated the correct threshold of vaccination coverage for herd immunity, while safety of multiple shots and of the additives contained in vaccines was reported by 61% and 31% of respondents, respectively. Only 41% of midwives had identified the pertussis vaccine as one of the vaccinations recommended during pregnancy. Attitudes were generally positive: 84% of respondents recognized recommended vaccines as effective and 86% as one of the safest health interventions. However, vaccinations against MMR and Varicella were perceived as useful by 86% and 71% of the midwives, while 89% and 77%, respectively, would recommend them to parents (compared to 96% in case of hexavalent). Globally, 79% of respondents would agree with the introduction of mandatory vaccinations for HCWs in maternity wards.

Conclusions:

Midwives show some gaps in the knowledge on vaccinations. The final results of this study will be used to build specific and tailored training programs directed to midwives involved in pregnancy management. This may help them to transfer the correct vaccination information for the empowerment and the growth of vaccine literacy.

Key messages:

- Pregnancy is a strategic teachable moment to influence attitudes regarding childhood vaccinations and healthcare professionals must be trained to be the vehicle of the most accurate information.
- Specific under- and post-graduate training courses on vaccinations directed to midwives are strongly needed to ensure good level of knowledge on this topic.

Healthcare Workers' attitudes towards mandatory influenza vaccination: a systematic review

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Background:

Influenza affects approximately between 5 to 10% of general population every year, leading to 3 to 5 million cases of severe illness, and about 290 000 to 650 000 respiratory deaths. Healthcare Workers (HCWs) play a crucial role in spreading the infection to patients. Although the strong recommendations provided, influenza vaccination coverage rates among HCWs are globally well below the coverage target set by WHO. The aim of this study is to assess attitudes towards mandatory influenza vaccination programs among HCWs, in order to make a quantitative synthesis of the phenomenon.

Methods:

The present study systematically reviewed published cross-sectional studies investigating attitudes towards compulsory influenza vaccination in Healthcare Workers. PubMed and Scopus scientific databases were searched and 4,198 results were returned. Of these, 23 met the inclusion criteria for the review and 13 were eligible for the meta-analyses. PRISMA statements were followed.

Results:

Thirteen studies were conducted in North America, 4 were conducted in Europe, 3 in Asia, 2 were performed in Australia and one study collected data both from Europe and Asia. According to the assessed studies, the percentage of agreement ranged from 44% to 95% for different compulsory vaccination programs. A combined prevalence of 59.8% (95%CI 50.1-68.8) was found in the meta-analysis. Having been vaccinated against influenza in the previous year increases the likelihood (OR 4.1; 95%CI 2.8-6.1) of being in favour of mandatory vaccination policies.

Conclusions:

Compulsory influenza vaccination programs are generally accepted by the majority of health professionals, especially by those who have already been vaccinated previously. These results could be important to improve European vaccination strategies, in order to increase influenza vaccination rates among Healthcare Workers.

Key messages:

- Mandatory influenza vaccination programs are accepted by the majority of Healthcare Workers.
- Having been previously vaccinated against influenza increases the likelihood of being in favor of a mandatory vaccination policy.

Impact of hepatitis B vaccine in Tunisia 20 years after its introduction

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Introduction:

Vaccination against hepatitis B represents the most effective preventive measure to reduce the global impact of this infection. In Tunisia hepatitis B vaccination was introduced for health professionals in 1992 and for the general population in 1995. The objectives of this study were to evaluate the impact of vaccination twenty years after its introduction.

Methods:

It was a descriptive study of data provided by the national survey of prevalence of Hepatitis B in Tunisia, which was a household-based study conducted in 2015. Blood samples sent to the reference laboratory to test markers of hepatitis B virus infection. The Vaccine effectiveness rate was calculated using the following formula: VE = 1 - Odds-ratio (OR), where OR = ratio of odds of being vaccinated among subjects with positive HBsAg test results to the odds of being vaccinated among subjects with negative HBsAg test results.

Results:

Approximately a quarter of our population reported having been vaccinated against HBV, a coverage rate of 26.9%. Among subjects above 20 years of age, this rate was 85.3%. Besides, 83.7% of vaccinated subjects had received the three required doses of the HBV vaccine. Analysis of vaccination status by great regions of the country showed that the vaccination coverage rate was higher in the southern region. Regarding HBsAg prevalence, the rate was significantly higher among unvaccinated subjects 0.3% vs 2.2% in those vaccinated (OR = 0.11 [0.07-0.18]). We found that among vaccinated subjects, the serologic response rate at vaccination was only 63.2% which represented 16.2% of the total population. The vaccine effectiveness indicated that vaccination reduced by 88.6% the risk of HBV infection.

Conclusions:

These results demonstrate that vaccination against hepatitis B introduced in the national immunization schedule since 1995 has reduced the infection although the vaccination coverage rate remains below 90%.

Key messages:

- Importance of vaccination that reduced by 88.6% the risk of HBV infection.
- More effort required to raise awareness about vaccination against HBV.

Vaccine Prevention of Paediatric Chronic Lung Disease: Targeting Haemophilus

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Background:

Chronic Suppurative Lung Disease (CSLD) is an emerging term encompassing a spectrum of chronic childhood respiratory disease. Characterised by early and severe infections and recurrent exacerbations, it is associated with progressive deterioration in lung function and quality of life. CSLD is highly unequally distributed and largely preventable, and is a major contributor to the global burden of chronic paediatric respiratory disease. Relatively few pathogens comprise the main culprit organisms identified in the aetiology of CSLD, over which Non-Typeable Haemophilus influenzae (NTHi) predominates.

Methods:

We review developments that establish the role of NTHi in disease progression, focusing on high-risk population subgroups with an established CSLD burden. We consider current studies examining the role of prenatal NTHi and pneumococcal vaccination in preventing CSLD through reducing infections in high-risk populations, and discuss current directions in future research, including the need for precise identification of the pulmonary microbiome in CSLD.

Results:

Early, repeated NTHi infections are clearly implicated in the aetiology of CLSD. Early results of current studies indicate NTHi vaccination may reduce the frequency of causal infections in high-risk groups. Clinical and immunological data show vaccination also reduces frequency of exacerbations and antibiotic usage in CSLD.

Conclusions:

We provide the first clinical and immunological data for H. influenzae vaccination in children with CSLD. Targeted vaccination strategies may prevent CSLD establishment, slow progression, and potentially reduce morbidity, healthcare presentations and antibiotic consumption. This implicates vaccination as a potential aid in both antimicrobial stewardship and prevention of chronic disease. In the face of threats posed to health systems by antimicrobial resistance and the growing burden of chronic disease, vaccination is again emerging as a uniquely powerful public health tool.

Key messages:

- Hi vaccination can reduce infective exacerbations and antibiotic use in children with CSL.
- Vaccines may have a role in preventing chronic disease progression and reducing antibiotic reliance.

Serologic antibody response to quadrivalent influenza vaccination in Polish elderly patients

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Background:

The effectiveness of immunization with subunit inactivated quadrivalent influenza vaccine (QIV) in the elderly has not been sufficiently estimated. The study objective was to evaluate QIV-induced antibody response and influencing determinants in Polish elderly patients.

Methods:

Consecutive patients $\geq$55 years old attending the Primary Care Clinic in Gryfino, Poland, received QIV (A/Michigan/45/2015 [A/H1N1/pdm09], A/Singapore/INFIMH-16-0019/2016 [A/H3N2/], B/Colorado/06/2017 [Victoria lineage], B/Phuket/3073/2013 [Yamagata lineage]) between October-December 2018. Hemagglutination-inhibition assays measured antibody response to vaccine strains before/after vaccination. Geometric mean titer (GMT)/titers ratio (GMTR), protection (PR) and response (RR) rates were calculated.

Results:

Among 108 participants (45.4% females; age 55-85, median 67 years) the highest GMTR after vaccination was observed for A/H3N2/(61.5-fold) followed by Victoria lineage (10.3-fold), A/H1N1/pdm09 (8.4-fold) and Yamagata lineage (3.0-fold). Most participants had a post-QIV protection for A/H3N2/ and Yamagata lineage vaccine strains (64.8%, 70.4% respectively); lower PR were observed for Victoria lineage (57.4%) and A/H1N1/pdm09 (41.8%). The RR was high for A/H3N2/ (91.7%) and Victoria lineage (68.5%), however, not satisfactory for A/H1N1/pdm09 and Yamagata lineage (59.3%, 52.8% respectively). Patients who received influenza vaccination in the previous year presented lower response to the both B strains compared to those who did not ($p < 0.0001$ and $p = 0.03$ respectively).

Conclusions:

Although vaccine-induced antibody response in the elderly Polish population was more effective against A/H3N2/and B Victoria, this introductory study supports the use of QIV. Prior season vaccination was associated with lower antibody response to the current vaccination; this was not consistent to vaccine strains. Further research to better investigate QIV effectiveness determinants in the elderly would be of value.

Key messages:

- Subunit inactivated quadrivalent influenza vaccine (QIV) is effective in elderly people and should be used.
- The response to vaccination is not consistent and depends on the strain of influenza virus.

Being Born during a Flu Pandemic as Risk Factors for Development of Schizophrenia

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Background:

Schizophrenia is a neurodevelopmental disorder of complex etiopathogenesis involving genetic and environmental factors. Mother's exposure to infectious agents during pregnancy has been, implicated in the pathogenesis of schizophrenia. Studies in experimental models support that flu virus can cause embryonic neurodevelopment damage such as that described for embryos that later develop schizophrenia, but epidemiological studies of the association between schizophrenia and gestation in times of a documented flu pandemic) are contradictory.

Methods:

The study is a cross-sectional study within the APNA Study (Navarre primary health care prospective cohort) that included 470942 people over 18 years old in Navarre (Spain). Date of birth, sex, and schizophrenia diagnoses made by psychiatrist on the basis of ICD-10 were extracted. People were classified according if their birth dates occurred within or around periods of flu pandemics in the second half of the 20th century: 1957, 1968 and 1977. The dates for these groups were from January of the year of the pandemic until December of the subsequent year. Logistic regression of adjusted by sex, age, and month of birth was performed. Because the cohort only includes people over 18 years of age, data for patients born during the influenza A subtype H1N1 outbreak of 2009 were not available.

Results:

Males have a higher prevalence of schizophrenia than females (OR = 1.516, 95% CI:
1.388-1.655), Adjusting by gender, month of birth and age, subjects born during (or the year after) years of flu pandemic relative to subjects born in non-pandemic years (OR = 1.335, 95% CI = 1.199-1.486). The latter relationship held for each pandemic studied in isolation of the others, with ORs of 1.476 (95% CI: 1.244-1.750) for the 1957-59 pandemic, 1.261 (95% CI: 1.060-1.493) for the 1968-70 pandemic and 1.280 (95% CI: 1,072- 1,528) for the 1977-78 pandemic.

Conclusions:

Been born during a flu pandemic may increase the risk of developing schizophrenia.

Key messages:

- Exposure to the influenza virus during gestation may increase the risk of schizophrenia.
- Flu Vaccination in pregnant women may reduce the risk of schizophrenia in their children.

Severe outcomes following invasive pneumococcal disease in adults in France

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Pneumococcal vaccine serotypes and host factors may increase the risk of severe invasive pneumococcal disease (IPD). In France, pneumococcal vaccination in adults is recommended for at-risk groups (immunosuppression or at-risk conditions/ diseases). In 2014-2017, we conducted a study of IPD in adults to identify factors/serotypes associated with disease severity.

We included IPD cases, excluding meningitis, in adults from 25 acute-care sentinel hospitals in six regions. Severe cases were IPD patients either admitted to an ICU or under mechanical ventilation or with severe sepsis or shock. Infectious disease specialists collected clinical/microbiological data on all cases. We calculated adjusted risk ratios (aRR) using binomial regression.

In 2014-2017, 908 cases (median age 71 (range 18-101) years) were diagnosed; 48%(431/908) were severe and 84%(764/908) were at-risk. Compared with non-risk individuals, the risk of severe disease increased from 20% (aRR 1.2; 95%CI 1.0-1.4) in cases with 1-2 chronic diseases to 30% (aHR 1.3; 95%CI 1.0-7.0) in those with >2 chronic diseases. The risk of severe disease was 42% (aRR 1.4; 95%CI 1.2-1.6) higher for PCV13 serotypes compared with non-vaccine serotypes. Among cases infected with PCV13 serotypes, the risk of severe disease did not differ (aRR 0.96; 95%CI 1.2-23) between no-risk or at-risk cases. However, among cases infected with non-vaccine serotypes, the risk increased 49% (aRR 1.5; 95%CI 2.1-22) in at-risk compared with no-risk cases (homogeneity test p = 0.03).

We observed a cumulative effect of concurrent comorbidities on severe IPD outcomes. The risk of severe IPD increased for vaccine serotypes regardless of risk status. However, non-vaccine serotypes increased the risk of severe outcomes only in risk groups, suggesting a different interplay between host factors and the pathogen in vulnerable groups. We recommend enhancing vaccination among risk groups and especially in those most at risk for poor IPD-related outcomes.

Key messages:

- Cumulative effect of concurrent comorbidities on severe invasive pneumococcal disease outcomes.
- Non-vaccine serotypes increase the risk of severe invasive pneumococcal disease outcomes only in vulnerable groups.

Improving access to post-exposure prophylaxis for Lyme disease: a role for community pharmacists

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Issue:

Virtually non-existent in Eastern Townships (ET) before 2010, Lyme disease incidence rate reached 52 confirmed cases per 100 000 in some districts in 2018, leading to post-exposure prophylaxis (PEP) recommendation by public health. To improve access to PEP, community pharmacists can now screen and initiate PEP under a collaborative practice agreement (CPA) with the regional Medical Officer of Health. Knowledge, attitudes and practices of pharmacists regarding Lyme disease PEP were surveyed after implementation of this measure.

Description of the problem:

312 community pharmacists practicing in ET were invited, in October 2018, to complete an online survey, based on Godin's integrative model (2012), with questions on professional characteristics, knowledge of CPA, attitudes about PEP, and facilitators and barriers to the use of CPA. Pharmacist's practices were evaluated using 8 clinical vignettes. Vignette-specific and a global score were calculated. Bivariate analyses were done to test the association between global score and knowledge, attitudes, facilitators and barriers.

Results:

Response rate was 13.8%. Most pharmacists knew (97.4%) and were in favor (93.1%) of the CPA, and believed it was effective to prevent Lyme disease (96.4%). The main barriers reported to using the CPA were related to the assessment of PEP criteria. With regards to practice, pharmacists answered correctly for clients presenting all criteria for PEP (80.6%), aged < 8 y.o. (51.6%), who had their tick removed for >72 hrs (67.7%), already presenting with symptoms (32.3%) or who had exposure in a non-endemic area (38.7%). Finally, none of the variables studied were associated with the global score.

Lessons:

This measure has now been expanded in other endemic regions in Quebec and a provincial CPA is under development. These results will help guide the development of the provincial CPA, specifically to better consider and to provide guidance regarding PEP contraindications.

Key messages:

- Pharmacist-initiated PEP is an innovative approach to increase timely population access to an essential preventive measure in the fight against Lyme disease in endemic districts.
- Additional guidance is required for pharmacists with regards to assessment of PEP criteria in future CPAs.

Advancement of hepatic fibrosis among general women with/without NAFLD

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Background:

Nonalcoholic fatty liver disease (NAFLD) is increasing, being prevalent at 30% of the general population worldwide. A part of NAFLD develops nonalcoholic steatohepatitis (NASH), liver cirrhosis and hepatocellular carcinoma. Hepatic fibrosis plays an important role in their pathogenesis. However, it is unclear how hepatic fibrosis is observed and advanced in NAFLD among general population. To investigate the hepatic fibrosis among general population, we prospectively observed hepatic fibrosis using serum markers.

Methods:

The subjects were 228 women who participated as a part of the Japan Multi-Institutional Collaborative Cohort (J-MICC) study in Kagoshima, Japan, and were followed from 2005 to 2014. NAFLD was defined as fatty liver by abdominal ultrasonography; consuming ethanol $<$ 20 g/day; and being none hepatitis B and C carriers. NAFLD were confirmed after two-time consecutive examination, because its disappearance is ambiguous in some cases. Hepatic fibrosis was evaluated using serum M2BPGi and Type IV collagen 7s. The comparison of their changed values between groups was done using the ANOVA adjusted for age. The association between their change and related factors was done using general linear regression model.

Results:

The prevalence of NAFLD was 31.6% at baseline. In the 5-year observation, the NAFLD + => NAFLD + (++) group was 23.7%; − +, 2.6%; + −, 7.9%; and - - (control), 65.8%. The values of M2BPGi and Type IV collagen 7s were higher in ++, -+, +- groups than controls at baseline. The change of M2BPGi values was observed in all groups, including controls, and the changed values were higher in ++ and -+ groups. Higher creatinine levels were positively associated with change of M2BPGi values. In contrast, the change of Type IV collagen 7s was not apparent.

Conclusions:

This study suggested hepatic fibrosis was advanced with age among general women without NAFLD, and the presence of NAFLD enhanced hepatic fibrosis more.

Key messages:

- Hepatic fibrosis may be slightly developing with age among general population, and will be enhanced with fatty liver.
- It is important to prevent fatty liver development to control risk factors, such as obesity and metabolic syndrome, to reduce the risk of NASH, liver cirrhosis and hepatocellular carcinoma.

8.R. Addiction and other matters

Treatment of the opioid use disorder in the primary health care in The City of Zagreb

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Issue/problem:

Management of patients with opioid use disorder commonly includes opioid agonist therapy as a part of an integrated treatment plan. These interventions are associated with proven benefits to the individual and society. Treatment choices in opioid use disorder pharmacotherapy should be based on the needs of the individual and characteristics of medications.

Description of the problem:

The aim was to present the use of pharmacotherapy in the treatment of opioid use disorder in family medicine practice in Zagreb. We collected data from 30 family physician practices, on patients treated for opioid use disorder. We analyzed the epidemiological characteristics of the patient, the diagnosis according to ICD X rev., as well as the frequency of the medication use and the duration of the treatment.

Results:

Data about 100 patients treated for opioid use disorder were obtained, (88% men and 12% women). The average age of the patients was 37.9 years. From all patients, 31% had dg. F.60, 22% had dg. F19, 15% had dg. F32, 3% had dg. F29. 19% of patients was HCV positive. 62%of patients were treated with buprenorphine and 38% with methadone. In 5% of patients buprenorphine was only medication in therapy. 53% of patients with buprenorphine use diazepam, 30% use buprenorphine with antidepressant, and 12% use diazepam and antidepressant with buprenorphine. All patients who are on methadone therapy are using some other medication in therapy. Methadone is commonly prescribed in combination with diazepam and antidepressant (55%). The following combination is methadone and diazepam (34%), a combination of methadone, antipsychotics and pregabalin (7%) and a combination of methadone, antidepressants and antipsychotics (4%). The average duration of treatment for opiate addicts is 11.9 years.

Lessons:

Patients who use buprenorphine in the treatment of opioid use disorder have less need for additional medication in therapy than patients who use methadone.

Key messages:

- Patients who use buprenorphine in the treatment of opioid use disorder have less need for additional medication in therapy than patients who use methadone.
- Treatment choices in opioid use disorder pharmacotherapy should be based on the needs of the individual and characteristics of medications.

Risk factors for hazardous drinking in university students from South Africa and Belgium

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Background:

Previous studies have associated certain risk factors with hazardous drinking in students. However, big cultural and geographical differences exist regarding alcohol use. In this study, we compare the alcohol use and hazardous drinking in Belgian (BE) and South African (SA) university students.

Methods:

An online survey assessing alcohol use among university students in South Africa (University of KwaZulu-Natal) and Belgium (University of Antwerp) was conducted, using the shortened version of the Alcohol Use Disorder Identification Test (AUDIT-C). For male students a cut-off point of 5 was used for hazardous drinking and for female students a score of 4. In total, 499 students were included in the study (250 BE and 249 SA students). A comparative analysis between both universities was performed for men and women separately with a Pearson chi-square test or Mann-Whitney U test. Furthermore, the association between hazardous drinking and several exposure variables was explored using multivariable logistic regression analysis.

Results:

A significant higher amount of male (94.8%) as well as female (92.4%) BE students drank alcohol in the last year compared to the male (66.2%) and female (67.8%) SA students ($p < 0.001$). Additionally, a significant higher amount of BE students were hazardous drinkers, compared to the SA students ($p < 0.001$). Multivariate analysis showed that male BE students were approximately five times more likely to be hazardous drinkers than male SA students (OR = 5.057, 95% CI 1.378-18.556; p = 0.015). Female BE students were over twice more likely to be hazardous drinkers than female SA students (OR = 2.371, 95% CI 0.846-6.644; p = 0.099).

Conclusions:

BE students drink significantly more alcohol and a significant higher proportion of BE students were hazardous drinkers compared to SA students. Qualitative research in both groups has been conducted to get more insight into the reasons of these differences and will also be presented at the Conference.

Key messages:

- When studying alcohol use (disorders) in university students, it is of utmost importance to take into account the socio-cultural context.
- After finding quantitatively assessed differences in alcohol use (disorder) across different socio-cultural settings, it is evenly important to find out about the reasons why.

The role of unjust treatment for experienced unmet need for health care among Finnish Roma

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Background:

Finland is currently undergoing a major reform of social and health care, one aim of which, is to reduce inequalities between different population groups in access to care. Previous studies showed that Finnish Roma minority are more likely to experience unjust treatment in health services and other public services in comparison to other minorities in Finland. Unjust treatment may influence health behaviors, including the use of health services, by decreasing trust towards health professionals as well as decreasing social, emotional, and physical resources. This study examined the association between experienced unjust treatment in public services and self-assessed unmet need for health care among Roma in Finland.

Methods:

We used data from the Roma health and wellbeing study (Roosa), conducted in Finland (2017-2018). The data was collected by the snowball method in different areas of Finland including a health examination and a structured interview. It covers 365 adults, and of those 223 (61.1%) were women. The outcome measure for unmet health care need was based on the question: "Do you feel that you have adequately received primary care services during the past 12 months?" Logistic regression was used to test the association between unjust treatment and unmet need for health care. Potential confounders were gender, age, marital status, education, employment and self-estimated health.

Results:

The prevalence of unmet need for health care was 37.8 percent among men and 43.7 percent among women. Those who experienced unjust treatment in public services had higher odds (OR = 6.23; $p < 0{,}001$) for unmet need for health care than those who felt treated just. This association remained after adjustments for the confounders.

Conclusions:

Over every third of the Finnish Roma experienced unmet need for health care. Unjust treatment seems to be a significant risk factor in access to care among Finnish Roma and its role needs further studies.

Key messages:

- Unjust treatment in public services is an indirect indicator of systematic and/or institutional discrimination.
- It is important to study the extent, nature and consequences of unjust treatment and discrimination to allow vulnerable groups to be taken into account better when renewing health services.

Frailty as predictor for all-cause and cause-specific mortality: 11-year follow-up cohort study

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Background:

Frailty is a geriatric syndrome characterised by sarcopenia, malnutrition, and chronic inflammation that leads to adverse health outcomes including dependency, low quality of life, and higher risk for morbidity and mortality. It was the aim of this study to examine the relationship between frailty status and risk of all-cause and cause-specific mortality.

Methods:

The study is based on data from the Survey on Health, Aging and Retirement in Europe (SHARE) including 11 European countries with an 11-year follow up. 24,634 participants with a mean age of 64.2 (9.8) 53.6% female, were analysed. Frailty status was calculated using the SHARE- Frailty Instrument, categorizing the participants as robust, pre-frail, and frail. Cox Proportional Hazard models were used to estimate the risk of all-cause and cause-specific (stroke, heart attack, other cardiovascular disease, cancer, respiratory illness, infectious, digestive and other) mortality in frail and pre-frail subjects compared to robust persons.

Results:

14.7% and 6.9% were found to be pre-frail or frail at the baseline. During the follow-up, we observed both pre-frailty and frailty being associated with a higher risk of all-cause and cause-specific mortality in the unadjusted model. After adjusting for sex, age, education level, body mass index, smoking, alcohol consumption and a number of comorbidities, frailty was associated with a higher risk of all-cause mortality [HR 1.56 (95% CI 1.37-1.78)], and mortality due to other cardiovascular diseases [HR 1.88 (95% CI 1.27-2.76)], cancer [HR 1.47 (95% CI 1.14-1.90)], and respiratory disease HR [1.82 (95% CI 1.10-3.01)]. Furthermore, pre-frailty was associated with a higher risk of all-cause mortality [HR 1.27 (95% CI 1.14-1.42)] and other cardiovascular disease mortality [HR 1.70 (95% CI 1.22-2.35)].

Conclusions:

Our study showed that baseline pre-frailty and frailty are associated with increased all-cause and cause-specific mortality over an 11-year follow up.

Key messages:

- Frailty but also pre-frailty leads to a higher mortality, even when adjusted for morbidity, lifestyle factors, and socio-demographic factors.
- More effort is needed to prevent, detect, and treat frailty and pre-frailty, both, on individual and on community level.

Potential predictors of unmet health needs among the elderly: a population-based study in Serbia

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Background:

This study assessed the prevalence of unmet health needs of the elderly and the associated factors regarding socioeconomic, health and functional status.

Methods:

A secondary analysis of the 2013 National Health Survey data was conducted on a representative sample of 3540 persons aged sixty-five and older (the lowest response rate was 99.7%). Participants characteristics such as socioeconomic status, health self-perception, diagnosed chronic disease, physical functional limitations, performing essential daily activities in the home and daily personal care were explored with logistic regression analysis (Odds Ratio - OR and 95% Confidence Interval) in relation to five aspects of unmet health needs.

Results:

15.8% participants had unmet health needs due to the long waiting times, 16.1%, had unmet needs for medical care, 17.7% for dental care, 15.2% for drugs prescription and 96.9% participants for mental health care. Common predictors exist for medical, dental drug prescription and due to long waiting times unmet needs including older age years, middle education, rural residence, lower wealth index, single persons, with average or bad self-perceived health, chronic disease and difficult daily performance of personal care and of home activities. Unmet mental health needs by 61% less likely had participants with average wealth index, while a greater likelihood had participants with average and bad self-perceived health by 3.7 times and 8.4 times ($p = 0.035$, $p = 0.001$) respectively, by 6.2 times those with difficulties ($p < 0.001$) and by 5.9 times unable ($p = 0.045$) to perform daily activities of personal care and by 1.7 times those with difficulties ($p = 0.037$) to perform home activities.

Conclusions:

Unmet health needs reported less than 20% of the elderly but almost all have unmet mental health needs. Unmet health needs are associated with negative health outcomes, age, low education level, single persons, rural settings, poorer households, and limited daily activities.

Key messages:

- Unmet mental health needs of the elderly are an extremely important problem for the health system and healthy ageing in Serbia.
- A strong association of unmet health needs of old, low educated elderly without partners, from rural settings and poor households with health and functional outcomes, requires responsive policies.

Changes in work stress among doctors in Norway from 2010 to 2019: a study based on repeated surveys

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Background:

Changes in the organization of health care can influence the doctorsˋ working conditions, which may in turn impact on doctorsˋ perception of work stress. Since high levels of work stress can affect both the doctors' own health and the quality of patient care, it is of importance for public health. We studied changes in work stress among Norwegian doctors from 2010 to 2018-19, and the associations of high work stress with job positions, self-rated health and sickness absence in 2018-19.

Methods:

The study populations consisted of representative samples of 1,500 to 2,200 doctors working as hospital doctors, general practitioners (GPs), private practice specialists and doctors in academia. Data were drawn from nationwide repeated postal surveys in 2010, 2016 and 2018-19 in Norway. Response rates were between 67%-73%. The main outcome measure was perception of work stress as measured by the validated short form of the Effort-Reward Imbalance Questionnaire (ERI). Linear mixed models, proportions with 95% confidence intervals and logistic regression model were used in the analyses.

Results:

From 2010 to 2018-19, the scores on the effort items (time pressure, responsibility, demands) increased significantly and the scores on the reward items (recognition, job stability, promotion prospects, prestige) decreased significantly for GPs, but remained stable for doctors in other positions. The proportion of doctors with high levels of work stress increased significantly for GPs. In 2018-19, high levels of work stress were associated with being a GP as compared with other job positions, younger age groups, average or poor health vs. very good or good health, but not with sickness absence or gender.

Conclusions:

During a nine-year-period, work stress increased significantly for GPs, but remained stable for other job positions. This may be partly due to several health care reforms. Less work stress may improve both the doctorsˋ own health and the quality of health care.

Key messages:

- From 2010 to 2018-19 in Norway, the proportion of GPs with high levels of work stress increased, while it remained stable for doctors in other job positions.
- This study supports previous findings on the association between high levels of work stress and health.

Midwifery matters: resilience and subjective wellbeing of midwives

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Introduction:

Resilience is the ability to resist, cope with life positively after suffering a negative event. Midwifery has been defined as 'emotionally demanding'; midwives with an higher levels of resilience experience higher levels of subjective well-being (SWB). The aim of this study was to evaluate the relationship between resilience and SWB amongst midwives.

Materials and methods:

Data were collected using a questionnaire, distributed between September 2018-January 2019 in hospitals in the Tuscany region (Italy). For evaluation of SWB, we used OECD scale (2013) evaluating three items: actual happiness (AH); emotive wellbeing (BE) composed of positive (PA) and negative affect (NA) and life satisfaction (LS). Also, job satisfaction (JS) was evaluated. Resilience (RS) was evaluated using the Italian version of the Resilience Scale by Wagnild and Young. All items were expressed on the Likert scale, statistical analysis was performed with Minitab 18.

Results:

In total 123 questionnaires were analyzed. The average scores were: AH: 6.9±1.8; BE: 5.9±1.6; PA: 6.0±1.8; NA: 4.2±2.1; LS: 7.1±1.6; JS: 6.5 ± 2.4. Average R was 130.3±18.1. RS was correlated ($p < 0.001$) to AH (Coef = 0.4), PA (Coef = 0.4), BE

(Coef = 0.3) e LS (Coef = 0.4). The sample was divided into three groups according to RS: low (LR)<116, medium (MR):116-139 and high (HR) $\geq$140. MR represented 44%, followed by HR (35%). AH, PA, BE values were significantly higher in the HR group (ANOVA; Tukey; $p < 0.001$). For NA the highest values were observed in the LR group, but the difference was not significant. LS resulted significantly lower in LR group (ANOVA; Tukey; $p < 0.001$) and JS was significantly higher in medium resilience group in confrontation to other two groups (ANOVA; Tukey; $p < 0.001$).

Conclusions:

Our results confirmed, that the higher levels of RS influenced positively almost all components of SWB (AH, PA, BE, LS). On the other hand to achieve a higher level of JS the level of RS should not be nor too high, nor too low.

Key messages:

- Midwifery has been defined as 'emotionally demanding', higher levels of resilience influenced positively almost all components of subjective wellbeing.
- The medium resilience was correlated to higher level of job satisfaction.

Serum modified HDL was associated with cardiovascular disease in a Japanese community-based cohort

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Background:

Previous studies have shown that high density lipoprotein (HDL) is protective against cardiovascular disease (CVD). However, recent studies suggested that function of HDL was more important than HDL cholesterol levels. The present study aimed to clarify the relationship between modified HDL levels and CVD incidence.

Methods:

LOX-1 (lectin-like oxidized LDL receptor) is the receptor that mediates modified LDL (low density lipoprotein) activity; however, some lipoproteins with apolipoprotein A1 (Apo A-1) are also bonded to LOX-1. In this study, serum LOX-1 ligand containing Apo A-1 was defined as modified HDL, which were measured by our new development method. We conducted a nested case-control study in a Japanese cohort study, involving 11,002 community dwellers. During 4.0 years follow-up, we observed 127 new CVD onsets. For each CVD case, age and sex matched three controls were randomly selected ($N = 381$). Serum samples collected at baseline survey stored at $-80\,^{\circ}$C were used for the measurement of modified HDL. We estimated multivariable-adjusted odds ratio (OR) and 95% confidence interval (CI) for the association between modified HDL levels and CVD by conditional logistic regression.

Results:

Modified HDL levels were associated with increased risk of CVD (OR for one unit increase of log transformed modified HDL, 2.05: 95% CI, 1.16-3.62) after adjustment for body mass index, hypertension, diabetes, LDL cholesterol, HDL cholesterol, lipid lowering agents, chronic kidney disease, smoking and alcohol drinking. The magnitude of OR was almost equivalent to those of hypertension and diabetes, which were 2.33 (95% CI, 1.37-3.98) and 2.61 (95% CI, 1.48-4.59), respectively. On the other hands, other lipids markers showed relatively weak associations with CVD.

Conclusions:

Serum modified HDL, i.e., LOX-1 ligand containing Apo A-1, might be a novel predictive marker for CVD in apparently healthy individuals.

Key messages:

- Recent epidemiologic studies suggested that function of high-density lipoprotein (HDL) was more important than HDL cholesterol level itself to predict cardiovascular disease.
- Modified HDL measured by a novel cell-free, non-fluorescent method as LOX-1 ligand containing Apo A-1, was a predictive marker for CVD after adjusting for other traditional risk factors.

8.S. Health workforce

Pharmacist to improve hypertension management: concordance between Europe and North America

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Problem:

Hypertension is highly prevalent but remains poorly controlled, notably in European countries where control rates are frequently worse than in Canada and the United States. One innovative solution for improving hypertension management is team-based care (TBC) with the involvement of a pharmacist.

Description of the problem:

We systematically compared recommendations for TBC in hypertension management in recent European (ESC/ESH), American (ACC/AHA), and Canadian (Hypertension Canada) guidelines and pinpointed potential roles and responsibilities of pharmacists.

Results:

The three guidelines recommend TBC for the management of hypertension, with the ACC/AHA Guidelines giving a stronger emphasis by providing a more exhaustive definition of TBC and by describing the composition of the team. The three guidelines assign roles and responsibilities in hypertension management at the team level, but no firm role is defined for each specific team member. The three guidelines also refer to evidence showing that the pharmacist's involvement can embrace several activities, that is, diagnosis of hypertension, blood pressure monitoring, medication management, education of patient and health care providers, and communication and organization within the care team. Recent systematic reviews have shown that a pharmacist's involvement in these steps in hypertension management improves hypertension control compared to standard of care.

Lessons:

International guidelines, including European ones, recommend using TBC in hypertension management, based on strong evidence that a pharmacist's involvement improves hypertension control.

Key messages:

- International guidelines recommend TBC and the involvement of pharmacists to improve hypertension management.

- Programs and policies to improve hypertension control in European countries should consider the involvement of pharmacists.

Teaching medical students multi-disciplinary team work through integrated course

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Healthcare reform in Kazakhstan has created a basis for shift from disease centered approach to person and prevention centered healthcare. In order to embrace that agenda, Kazakh National Medical University has developed and implemented project-based course in General practitioners (GP) training program at the internship level. The objective of the program is to acquire skills on work in multidisciplinary teams for health promotion and research. We used project-based learning pedagogical framework for the course. 6 ECTS course was integrated into curriculum of internship in the track of GP training, at the 7th year, for 1 semester. During the course participants were introduced to the theoretical concepts of health promotion and disease prevention program planning, created and implemented their own project. At the end of the course students were required to do a poster presentation. Main outcomes of educational program were that students will (1) gain understanding of health promotion and disease prevention concepts, (2) would be able to implement research skills, (3) and work in integrated multidisciplinary team. To measure results, we disseminated self-administered online based questionnaire for students after the last class (n = 122). Questionnaire consisted of 4 domains: self-development and team work, teaching, context and clinical practice. There were 17 domains that students assessed with 5-point Likert scale, where 1- strongly disagree, 2- disagree, 3- agree to some extent, 4 - agree, 5 - strongly agree. Questionnaire also included 1 open - ended question for overall comments on the course and demographic questions. The response rate was 68,8% (n = 84), overall satisfaction rate was 77.6% (3.88 out of 5), rate on team work and practical work was 86% (4.3) and 83.6% (4.18). Comments of students showed that there is still not enough understanding on integrated person-centered primary healthcare approach and lack of integrated team work at clinical sites.

Key messages:

- Education of future general practitioners should include training on teamwork in integrated teams and health promotion.
- Project based learning helps training multi-disciplinary team work skills not only within students but also in teams at involved sites.

Final clinical practicum of nursing education and transition experience of new nurses

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Background:

Challenges in transitioning from a student to a registered nurse may contribute to new nurses high turnover rates. Final clinical practicum (FCP) before graduation is known for its importance in preparing students for the transition but little is known about the specific elements of FCPs essential for successful transition. We examined the associations between multiple FCP elements and transition experiences in new nurses and whether work characteristics modified these associations.

Methods:

The data were collected in 2018 with electronic survey. The sample comprised 712 Finnish nurses graduated within the last two years. Linear regression analyses was used to examine the association of five FCP elements (Preparing for demands; Being part of team; Systematicness of FCP; Teacher involvement; Quality of supervision) with the transition experience that was measured with four scales demonstrating its emotional, physical, socio-developmental and intellectual domains. Work characteristics were defined based on demand-control -model and multiple potential confounders were considered.

Results:

Several associations were found between the FCP elements and the four transition indicators (psychological distress, sleep problems, role conflict/ambiguity and perception of transition/educational preparation). Systematicness of FCP was, however, the only element associated with all the transition indicators, whereas quality of supervision was not associated with any. Multiple interactions were also detected between the FCP elements and job demands.

Conclusions:

Our results suggest that FCP experiences reflect to new nurses' first years of employment. Especially systematic planning and implementation of FCP, collegial work atmosphere and an opportunity for students to become an active member of the work community should be ensured for promoting a smoother transition from student to nurse. This could increase the chances to retain new nurses in the health care workforce.

Key messages:

- Well planned and implemented final clinical practicums with an opportunity to become an active member of professional team could help nursing students to obtain a smoother transition into nurses.
- The benefits of having a good final clinical practicum experience may be squandered if considerably high level of job demands (e.g. timepressure) is experienced in the first years of employment.

Health Communication needs of health professionals in Europe – the H-COM cross sectional study

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Background:

Effective communication between Health Professionals (HP) and patients is crucial for the overall functioning of the healthcare system with positive impacts on readmission rates, treatment outcomes, adherence and costs. However, health communication training is limited especially during medical training. In the framework of the EU H-COM project an exploration of health communication needs and gaps and preferred training methods was performed among HP.

Methods:

A cross-sectional online survey was conducted among 702 health professionals (Physicians: n = 315; Nurses: n = 258; Other: n = 129) through a purpose made questionnaire available in English, Greek, Polish, Spanish and German.

Results:

Health communication training is considered necessary for physicians (89.8%) and nurses (89.7%), although 42.4% of them never received relevant training in the past. Professional status ($p < 0.001$), age ($p = 0.079$), gender ($p = 0.090$) and years of experience ($p = 0.012$) affected the likelihood of not having received such training, with physicians, HPs aged 45-54 years old, males and those having 6-10 years of experience being most in need. At least 50.0% reported encountering problems in communicating with their patients and facing several barriers either in primary health care settings and hospitals or in private practice. The ability to listen and answer patients, deliver bad news and obtain medical history were the most important communication skills identified, while the most suitable training method was learning relevant practical skills. The availability of such trainings is reported as being fair or poor at all educational levels by the majority.

Conclusions:

Health communication training is considered important although currently not available to the extent needed. This research provides evidence concerning the preferred type, frequency and mode of health communication training providing also insight on differences between various HPs.

Key messages:

- Health communication training is crucial but inadequate in Europe. There are specific training needs and preferences among HP which need to be considered.
- Health communication training needs to be adapted and tailored to professionals' age, experience and status.

Engaging a wider public health workforce: bringing public health into architecture education

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Background:

Current public health challenges necessitate the closer working of public health with built environment professionals. Despite growing evidence of benefits, there remains little progress in practice. Architects can play a key role in ensuring urban and building design is health promoting, however there is no requirement to teach health by architectural accreditation bodies across Europe.

Objectives:

In the United Kingdom in 2010, the Public Health Practitioner in Residence programme (PHPiR) was established to address this situation. Public health professionals are embedded within the Faculty of Environment and Technology at the University of the West of England, and contribute to research, pedagogic programme development, teaching and mentoring. The aim was to embed public health concepts and issues into architecture training, to empower the profession as part of the wider workforce, to improve health and wellbeing when designing buildings and places. The PHPiR was evaluated using the Reach, Effectiveness, Adoption, Implementation, Maintenance (RE-AIM) framework. Data was collected (questionnaires, focus group, semi-structured interviews, programme documentation) on a Masters of Architecture cohort (N = 34) at intervals from 2011-2019 to see if the PHPiR has long lasting effects as students enter practice.

Results:

Public health concepts including; inequalities, life course approach, and social capital, became embedded into the architecture curriculum. Projects produced had increased reference to wider health promoting issues and participants thinking shifted from the building itself to who would use the building, suggesting the intervention achieved its aims.

Conclusions:

The PHPiR offers a novel approach for built environment professions to better understand public health issues and the relevance to their chosen fields. This model could be applied to other courses and replicated in educational institutions and public health training programmes across Europe.

Key messages:

- The PHPiR influenced the architecture curriculum, improved architects understanding and public health issues and concepts, and empowered them to create more health promoting environments.
- Embedding public health professionals into training for other disciplines may be an effective, sustainable method for increasing the wider public health workforce.

Delegation of medical services to specially trained medical practice assistants

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Background:

Germany is one of the countries most affected by demographic change. Meaning the shift towards the population being older is growing. At the same time, the number of doctors is declining. In order to ensure adequate care in Germany, the delegation of medical services to specially trained medical practice assistants (MPAs) is currently discussed. The aim of this study was to assess the attitudes of the German population towards medical delegation.

Methods:

The analysis was based on a population survey of 6.105 German-speaking residents aged 18 years and over. Associations between respondents' attitudes towards the delegation and social determinants (age, gender, education, employment status, region, self-rated health) were assessed using standardised questionnaires. Bi- and multivariate (logistic regression) analyses were performed.

Results:

In case of a chronic disease half of the German-speaking population (51. 8%) would accept getting treated by a MPA. More older participants (65 years and above) than younger participants (18 to 34 years old) (OR: 1,64; KI [1,24-2,18]), more lower than higher educated participants (OR: 1,20; KI [1,04-1,39]) and more non-German than German participants (OR: 1,61; KI [1,24-2,10]) are significantly more likely to not accept medical delegation in case of a chronic disease. Discussion: In the debate on delegation models the present results should be taken into account in order to be able to address relevant target-groups. Further qualitative studies that investigate the reasons for the critical view on delegation are recommended.

Key messages:

- Approximately 50% of the German-speaking study population would accept treatment by a MPA for chronic disease.
- Especially older study participants, lower educated people and non-German participants would not accept medical delegation in case of a chronic disease.

Human Resources for Health challenges during health emergencies—low number of workers in El Salvador

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El Salvador is one of the 57 countries considered to be in Human Resources for Health (HRH) crisis according to the World Health Organization (WHO). El Salvador's healthcare worker density is 1.95 health professionals per 1,000 population, with even lower numbers in certain departments of the country. There have been improvements in the distribution of healthcare workers since 2010; however, on average it has remained ''in crisis'' based on the 2006 World Report

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definition. The increase in vector borne diseases in the region, has resulted in an overwhelmed vector control system and public health sector in many Central American countries. This study aims to analyze whether the healthcare workers identify the numbers of HRH as a factor that affects the health system response during health emergencies.

Through an extensive review of scientific literature, country reports, 16 meetings and 34 in depth semi-structured interviews with key stakeholders; this paper explores the challenges healthcare workers faced and how they were influenced by the numbers of available HRH during recent arboviral epidemics in El Salvador, using the recent Zika epidemic as a point of comparison.

The study findings suggest that some of the barriers that the health workforce identified during health emergencies include factors related to the low availability of HRH such as feelings of tiredness, being overwhelmed, as well as a need to rely on doctors in their social year in some areas of the country. Despite this, they also recognize that the recent intersectoral work done by the government and the Ministry of Health, has helped to overcome the obstacles of a low healthcare workforce by involving other sectors of society into the emergency response. Therefore, there is not a clear consensus on how the low number of HRH affect the health emergency response.

Key messages:

- The study findings suggest that some of the barriers that the health workforce identified during health emergencies include factors related to the low availability of HRH.
- They also recognize that the recent intersectoral work done by the government and the Ministry of Health, has helped to overcome the obstacles of a low healthcare workforce.

Informal carer in Portugal: moving towards political recognition in Portugal

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Informal care represents around 80% of all long term care provided in EU countries. Nevertheless, the needs for this type of care are expected to increase in the coming years in all OECD countries.

Portugal is among the OECD countries with the highest ageing index (21.5% of the population was older than 65 years in 2017) due to high life expectancy and low fertility rates. As this demographic trend establishes, Portugal is expected to have more than 40% of the population over 65 years in 2037, and the expected prevalence of dementia is 3%, in 2050. In 2015 there were 2.1% of people over 65 receiving long-term care, representing 52% of all long-term care users. Around 38% were receiving care at home. It is estimated that 287,000 people in Portugal depend on informal carers.

The agenda towards the official recognition of informal cares has been push forward in the country. Since 2015, several recommendations have been issued by the Parliament as well as legislative initiatives and a proposal for a Status of the Informal Carer is currently under discussion. We analyse the process of formulation of this policy in terms of sectors and stakeholders involved, definition and scope of informal carer, rights and obligations, role of the person being cared for, formal protection (e.g., labor, social, financial, training) and implementation.

Recognition of the informal carer is a sector wide approach. One of the main features is the economic, social and labor protection mainly through reconciliation between work life and caring activities and promotion of the carer's well being. Notwithstanding, and from a health system perspective, community health teams are to be the focal point for informal carers, supporting and providing specific training whenever needed. Despite its relevance, informal care should not be professionalized and responsibility of care should not be shifted from health services to informal carers.

Key messages:

- Needs for informal care are expected to increase in the coming years in OECD countries.
- Recognition of the informal carer is a sector wide approach.

Older Patients in Emergency Departments. Challenges from the health care providers' perspective

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Background:

Patients aged 65 and above are the fastest growing patient population in Europe. This is one of greatest challenges for almost all health services providers, including acute hospitals and their Emergency Departments (ED). As of today, older patients represent up to 30% of all ED patients, it is estimated. However, it is largely unclear to what degree EDs are currently prepared for older patients and how they need to adjust. This study analyses the present situation from the perspective of health care professionals caring for older ED patients.

Methods:

The study was embedded in a mixed methods design using qualitative expert interviews. N = 25 semi-structured, guided interviews were conducted with professional health care providers from 7 Berlin EDs (physicians, nurses), and adjacent health care sectors such as nursing homes, rehabilitation clinics, and medical practices. Interviewees were asked about their daily experiences with older ED patients and their ideas of health care deficits and potentials. Data was analyzed using content analysis and hermeneutics.

Results:

Health care providers assess the ED care situation for older patients and the necessity of adjustments in different ways but mostly as deficient. EDs are described as not elderly-friendly and partly as hazardous: older patients are at risk of adverse events such as developing a delirium. Risk factors are prolonged length of stay, the busy and noisy ED setting, and falls hazards. In general, ED staffing is not adequate to care for older patients with complex needs.

Conclusions:

Considering demographic change, German Eds need to concentrate on the growing number of oder patients and their specific needs. Further research and development of specific care concepts for older ED patients is strongly needed. Potential adjustments of ED structures and care concepts also need to involve patients' experiences and subjective needs. However, data on the patient perspective is still missing.

Key messages:

- Older patients and demographic change represent great challenges for EDs.
- Care concepts need to be developed to meet older patients needs and to avoid risks of adverse events.

Attitudes of social welfare professionals of the concept of positive health in the Netherlands

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The current definition of health from the World Health Organisation seems to no longer meet the changes in the current Dutch health system. An alternative approach which puts emphasis on health, not disease, is Positive Health. The current and future developments in the health care system in the Netherlands are demanding different mentality and practice methods of social work and welfare professionals. In order to measure the extent to which there is support for positive health among the social welfare professionals, research must be carried out into the attitude of the professionals. In this study, the attitudes towards the concept of Positive Health of social welfare professionals are examined.

Methods:

A mixed-method study was used, in which both quantitative and qualitative data were collected. By means of a survey (n = 128) and semi-structured interviews (n = 9), the attitude and working method of social workers were explored.

Results:

Social welfare professionals find that the concept Positive health can contribute to an increase in resilience and self-management in citizens and patients. However, social welfare professionals wonder if all citizens and patients have the ability to self-manage skills. In addition, social welfare professionals think all domains of the positive health concept are regarded as important in defining health.

Conclusions:

The concept of positive health is in line with the attitude of social welfare professionals and has support for implementation. In order to introduce the concept Positive Health further and to make it stand out in the social welfare domain, more attention needs to be paid to disseminating the concept, broadening the knowledge of the professionals and practical tools for practice.

Key messages:

- Positive Health concept connects professionals in health care and welfare.
- The concept of positive health is in line with the perceptions of health of the social welfare professionals.

9.R. Child health

Parental health literacy and health behaviors in children: a 2017 cross-sectional survey in Germany

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Background:

Health literacy (HL) is closely associated with leading health indicators. Parents represent a critical subgroup among the adult population since they are not only responsible for their own health but also for the health of their children. Previous research suggests that parents with low HL are less likely to meet the preventive and health care needs of their children but the relationship between parental HL and child health is not yet well understood.

Methods:

A cross-sectional survey was implemented in 2017 in 28 public schools in Germany. The parent questionnaire was completed by 4217 caregivers and included the short form of the HLS-EU-Q16. The child questionnaire examined health knowledge, behaviors and outcomes. For children under 11 years, the caregiver reported on behalf of their children (N = 1518). In all other cases, the children completed the questionnaires (N = 2776). Bivariate and multivariate analyses were carried out.

Results:

Among the interviewed parents, 45.8% showed a problematic or inadequate HL. Parents with higher HL reported a better subjective health and quality of life, and they judged their children as being healthier. The major determinant of high parental HL was socio-economic status ($r = .088^{***}$). High parental HL was associated with positive health behaviors in children including higher consumption of fruits and vegetables, fewer sweetened beverages, regular tooth brushing and more physical activity. The relationships between parental HL and smoking, alcohol consumption, sexual activity among children and children's weight were not significant.

Conclusions:

The results confirm a relationship between low parental HL, SES and some problematic health behaviors in children. Strengthening the HL of vulnerable parents may contribute to improved health outcomes particularly in the areas of children's nutrition, exercise and dental health, and parents should be integrated in school-based activities of health promotion and prevention.

Key messages:

- There is a strong statistical relationship between parental health literacy and socio-economic status.
- Parental health literacy is associated with child health behaviors (e.g., nutrition, exercise).

Parents' socioeconomic position, psychological problems, and emotional neglect in childhood

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Background:

Despite high prevalence and severe consequences for health and wellbeing, emotional neglect (EN) in childhood is a neglected topic in epidemiological research. To enable prevention of neglect knowledge is important about conditions related to EN such as parental individual characteristics and social/economic situation. Aim to investigate the relationship between parental socioeconomic position (SEP), psychological problems, and EN in childhood.

Methods:

The sample comprised Swedish women, N = 976, mean age 22. EN was assessed by five indicators: maternal/paternal rejection, maternal/paternal lack of time, and occurrence of domestic violence. The associations between parental SEP/psychological problems and EN were examined by logistic regressions.

Results:

The odds of experiencing domestic violence in childhood was higher among women with parents with low (OR 3.1 95% CI 1.1-8.5) or medium SEP (OR 3.4 95% CI 1.7-6.9). Women who reported maternal psychological problems had higher odds of maternal rejection (OR 6.8 95% CI 3.5-13.0), maternal lack of time (OR 2.4 95% CI 1.2-5.0) and paternal rejection (OR 1.9 95% CI 1.1-3.5). Women who reported paternal psychological problems had higher odds of perceiving their father as rejecting (OR 4.0 95% CI 2.1-7.7), not having enough time for them (OR 4.9 95% CI 2.3-10.6), and experiencing domestic violence (OR 4.9 95% CI 2.1-11.6).

Conclusions:

Lower SES was not related to EN in form of parental rejection or lack of time but to the occurrence of domestic violence. Parental psychological problems were related to all indicators of EN but differently among mothers and fathers. Public health initiatives aiming at supporting parents should also embrace parental psychological wellbeing.

Key messages:

- Emotional neglect was clearly related to parental psychological problems but not parental socioeconomic status.
- Gendered structures need to be considered in studies of emotional neglect.

Parental mental vulnerability and use of healthcare services in infants

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Background:

Parental mental illness has been associated with a number of consequences for the health and use of healthcare services of the child. However, most research has focused on maternal depression. Research examining the impact of paternal mental vulnerability (MV) as well as different degrees of MV are needed to plan interventions. Therefore, the aim of this study was to examine the association between different categories of individual and combined parental MV and the child's use of healthcare services the first year of life.

Methods:

A population-based birth cohort study was conducted including all Danish children born from 2000-2016 using the Danish national registers. Exposure was parental MV of three categories according to the degree of MV: Group 1 ''minor MV'' with mental related contacts to primary healthcare and/or prescribed psychopharmaceuticals, group 2 ''moderate MV'' and group 3 ''severe MV'' both with contacts to psychiatric hospital. Outcome was contacts to GP the first year of life expressed as incidence-rate ratios (IRR) using Poission's regression analyses.

Results:

The analyses included 952,709 children. 21% of the mothers and 11% of the fathers were in the MV groups. Parental MV (any parent, any MV-group) was associated with an increased risk of GP contacts daytime and out-of-hour contacts. If both parents were classified as group 1 MV, IRR were 1.21 (CI95 1.20-1.22). IRR were 1.18 (1.17-1.18) resp. IRR 1.05 (1.04-1.06) if only the mother resp. father were in MV group 1. The same pattern were seen for out-of-hour contacts; IRR 1.28 (1.26-1.31) for both parents in group 1 and IRR 1.19 (1.18-1.20) resp. IRR 1.09 (1.08-1.11) for the mother resp. father.

Conclusions:

Maternal and paternal MV were associated with an increased risk of GP contacts daytime and out-of-hour contacts although maternal MV had the highest risk. Even minor MV had an impact on healthcare contacts and the risk increased further if both parents were classified as minor MV.

Key messages:

- Both maternal and paternal mental vulnerability has an impact on the child's healthcare contacts.
- Our results indicate the need for a focus also on minor mental vulnerability in the planning of interventions.

The effectiveness of a web-based Dutch parenting program to prevent overweight in children age 9-13

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Background:

We developed a web-based parenting program for parents entitled ''Making a healthy deal with your child''. This e-learning program can be incorporated into existing prevention programs, thereby improving these interventions by reinforcing the role of parenting and providing parents with practical tools for use in everyday situations in order to stimulate a healthy lifestyle.

Methods:

The effectiveness was studied in a two-armed cluster randomized controlled trial. We recruited 548 parent-child dyads of children 9-13 years in the Netherlands who participated in an existing school-based overweight prevention program. Primary outcomes included the child's dietary and sedentary behavior, and level of physical activity. Secondary outcomes included general parenting style, specific parenting practices (set of rules, modeling, monitoring), and parental self-efficacy. Multilevel multiple regression analyses in Mplus were conducted.

Results:

87% of the parent-child dyads participated in the study and 47% of the parents in the intervention group completed 2 or more episodes of the e-learning. The score that parents gave to the e-learning is a 7.Main effect analyses showed in the intention-to-treat analyses that the the parents in the intervention group have more strict rules regarding eating snacks (0.046) and children of parents in the intervention group drink more milk ($p = 0.018$) and less sugar sweetened beverages ($p = 0.024$). The completers only analyses showed that the children of parents in the intervention group eat more vegetables and fruit, drink more water and less sugar sweetened beverages, and had less screentime than the children in the control group.

Conclusions:

The e-learning program showed small indications to be effective. A second effectiveness study is currently being investigated. If the e-learning proves to be effective it can be easily incorporated into existing overweight prevention programs for children, as well as activities regarding Youth Health Care.

Key messages:

- The e-learning can easily incorporated into existing overweight prevention programs for children.
- www.gezondeafsprakenmetjekind.nl

Early socioeconomic circumstances and cardiometabolic health in 10-year-old children

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Background:

Social adversity is thought to become biologically embedded during sensitive periods of development, setting children on a trajectory of increased risk for later chronic diseases. Thus, social differences are expected to be expressed as biological alterations and might have their origins in early life. Therefore, we aim to estimate the association between early socioeconomic position (SEP) and cardiometabolic health during childhood.

Methods:

Data from 2962 participants in the population-based birth cohort Generation XXI, from Porto, Portugal, was collected following standardized procedures at all study waves. Early SEP definition included household income, parental education and occupation at child's birth. Cardiometabolic health was characterized at the age of 7 and 10, considering the triglycerides, cholesterol, fasting glucose, body mass index, systolic and diastolic blood pressure. Logistic regression was used to estimate the association between early SEP and a favorable cardiometabolic health profile.

Results:

A favorable cardiometabolic profile was observed in almost half of participants at both ages, particularly among high SEP children who remain more frequently without alterations. For girls, higher paternal education at 7 years (OR:1.49;95%CI:1.03-2.15) and higher SEP at 10 were associated with better cardiometabolic health profile. In boys, a better cardiometabolic health profile was observed with increasing levels in maternal and paternal education and occupation, but at the age of 10, social differences were more evident according to parental education.

Conclusions:

We provide evidence that children from more advantaged SEP at birth have an increased likelihood of presenting better cardiometabolic health at early ages. Social differences in cardiometabolic health biomarkers are already found in childhood, suggesting that the short-term impact of early life SEP on the physiology dysregulation takes place already in the first decade of life.

Key messages:

- Social differences in cardiometabolic health are already established in the first decade of life, with children from higher SEP presenting a better cardiometabolic health.
- Cardiovascular events are not expected to develop during childhood, however the underlying atherosclerotic process might already be in course as social differences appear to widen with age.

Early socioeconomic circumstances and adverse childhood experiences in 10-year-old children

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Background:

Evidence showed that adverse childhood experiences (ACEs) are associated with the development of disease later in life and premature death. Examining the occurrence of these experiences at early ages would contribute to intervene and therefore to reduce health inequalities. This study aimed to assess the prevalence of ACEs among 10-year-children and to examine its association with early socioeconomic circumstances.

Methods:

At the fourth wave of the population-based birth cohort Generation XXI, from Porto, Portugal, 5153 children completed a self-report questionnaire on 9 experiences related to household dysfunction and physical and emotional abuse. Socioeconomic circumstances included household income, maternal and paternal education, and history of parental unemployment. Logistic regression was performed to calculate the Odds Ratios (OR) and 95% Confidence Intervals (95%CI).

Results:

A high prevalence of physical and emotional abuse was reported by children from low socioeconomic circumstances. A graded relationship between socioeconomic circumstances and cumulative ACEs was observed, for instance, low household income was associated with increased number of ACEs (one event [OR = 1.10; 95%CI: 0.89-1.36], two events [OR = 1.41; 95%CI: 1.15-1.73], three events [OR = 1.67; 95%CI: 1.34-2.06], and four or more events [OR = 2.05; 95%CI: 1.64-2.55]). Also, living with one parent or none of them increased the likelihood of reporting multiple ACEs (OR = 5.50; 95%CI: 4.23-7.13).

Conclusions:

Children from low socioeconomic circumstances were more likely to report multiple adverse experiences in the first decade of life. These findings support that children from less advantaged environments might be at a higher risk of co-occurrence of adverse experiences during their childhood.

Key messages:

- Prevalence of ACEs is high among 10-year-old children and is associated with low socioeconomic circumstances.
- Social inequalities in children should be prioritized by public health policy.

Spatial analysis and mapping of child malnutrition in Burkina Faso

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Background:

Approximately 45% of all child deaths are associated with malnutrition in sub-Saharan Africa. However, information on the geographical variations of child malnutrition in Burkina Faso is limited. This study examined the geographical distribution and the community characteristics associated with child malnutrition in Burkina Faso using spatial regression analysis.

Methods:

Data from the 2011 Burkina Faso Demographic Health Survey were analyzed. A representative sample of 572 communities and 6,120 children under age of five were in the survey. A general Kriging interpolation method was used to generate spatial malnutrition patterns. The Local Indicator of Spatial Autocorrelation was used to identify particular communities clustering with high and low child malnutrition scores. In the spatial regression analysis, we used a two-step procedure combining generalized estimating equation models (GEE) and spatial lag modeling techniques.

Results:

The average rates of stunting and wasting were 32.48%, and 15.05%, respectively. Stunting hotspots were observed to be in the eastern and northeastern part of Burkina Faso (i.e. Oudolan, Séno), while high rates of wasting were observed in the central-north part. The results of the spatial regression analysis revealed lower stunting rates in communities with a higher percentage of households with improved sanitation. Communities with higher rates of professionally assisted births were associated with low wasting rates while communities with higher rates of households with low wealth index reported higher rates of wasting. Spatial lag models appeared to estimate the relationship between community-level risk factors and stunting and wasting more accurately than the ordinary least squares models.

Conclusions:

This study revealed significant geographical patterns and community factors associated with childhood malnutrition. These factors should be considered for future programs aiming at reducing child malnutrition in Burkina Faso.

Key messages:

- The study identifies spatial trends and contextual factors associated with child malnutrition in Burkina Faso.
- Public health programs should focus on the regions identified as hot spots of child malnutrition in Burkina Faso.

Social-emotional problems among Swedish three-year-olds: an Item Response Theory Analysis

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Background:

Young children's social-emotional problems can have a long-term effect if not treated early. In order to deepen our knowledge about children's social and emotional functioning, we utilized the Ages and Stages Questionnaires: Social-Emotional (ASQ:SE) among 3-year-olds in Sweden aiming: 1) to identify ASQ:SE items that are most commonly endorsed by children with high level of social-emotional problems; and 2) to assess whether certain ASQ:SE items differs between boys and girls at the same level of social-emotional problems.

Methods:

During 2014-2017 data was collected from 7179 three-year-old children through Child Health Care in a northern county of Sweden within the Salut Child Health Promotion Programme. Item Characteristic Curve (ICC) and Differential Item Functioning (DIF) were used to identify the characteristics of children with high social-emotional problems and to determine whether an item exhibit uniform between boys and girls at the same level of social-emotional problems.

Results:

Items regarding interest in sexual words, too little sleep, disinterest in things around, unhappiness and self-injury were more commonly endorsed by children with high levels of social-emotional problems. Additionally, on the same level of social-emotional problem girls were more likely to score high in items regarding difficulties to occupy herself, clinging behaviour and repetitive behaviour while boys were more likely to score high in items regarding difficulty to name friends, difficulty to express feelings and destruction of things on purpose.

Conclusions:

This study has increased our knowledge about Swedish young children's social emotional functioning already at the age of three by detecting which items are most closely connected to high level of social-emotional problems and differences between boys and girls. However, whether the results detected in this analysis are reflecting their parents' expectations more than child behaviour requires further investigations.

Key messages:

- Children with high level of social-emotional problems were rated high on items regarding interest in sexual words, too little sleep, disinterest in things around, unhappiness and self-injury.
- On equal levels of social-emotional problems, girls were more often reported with internalizing problematic behaviours and boys were more often reported with externalizing problematic behaviours.

Are neighbourhood characteristics associated with physical activity levels in schoolchildren?

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Background:

Moderate-vigorous physical activity (MVPA) is an essential determinant of health for children. However 82% of children aged 11-17 years in Turkey are physically inactive. The objective of this study was to determine the prevalence of physical inactivity (PI) and sociodemographic and neighbourhood characteristics associated with PI among children aged 9-13 years.

Methods:

The population of this cross-sectional study was 5-7th grade students attending schools in a district of Istanbul. Two schools from urban and two from semi-urban localities were selected in order to capture different neighbourhood characteristics. Sample size was calculated as 344 assuming a difference of PI prevalence of 15% between neighbourhoods, an alpha error of 0.05, a power of 80%. Data were collected by child and parent questionnaires. PI was defined as < 60 minutes MVPA per day within the previous week. Neighbourhood characteristics were evaluated as physical (walkability levels, structure of sidewalks, presence of yards/parks, traffic density) and social (characteristics of social networks, trust among neighbours). Factors associated with PI were analysed by logistic regression.

Results:

A total of 334 students participated with a response rate 96%. The median age was 11 years and 52.9% were girls. The prevalence of PI was 79.3% (95%CI: 75.0-83.7%). Neighbourhood characteristics were not associated with PI ($p > 0.05$). PI was associated with ownership of mobile phones (OR: 1.96, 95%CI: 1.01-3.78), not being a member of a sports team (OR: 2.83, 95%CI: 1.21-6.58) and having ≤ 1 day of physical education classes at school (OR: 2.10, 95%CI: 1.08-4.09).

Conclusions:

The prevalence of PI is very high among schoolchildren. School-based interventions as motivating children to participate in sports teams and having physical education classes >1 times per week could be achievable strategies to combat PI. There is a need to adapt objective methods for assessment of neighbourhood characteristics.

Key messages:

- PI is a prevalent public health problem among school children in urban and semi-urban environments.
- The effectiveness of increasing structured physical activity levels at schools by utilizing sports teams and physical education classes should be evaluated in future studies.

Sexual maturation in girls: association with physical activity and sedentary behaviour

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Introduction:

During adolescence, physical activity tends to decline, especially among girls. Adolescent inactivity is due in part to biological factors, among which pubertal development may play a role. Our aim was to study in girls, the relationship of sexual maturation based on menarche with physical activity and sedentary behaviour.

Methods:

Analyses were based on a two-stage random sample of 3,911 10-15-year-old girls included in the 2018 cross-sectional Health Behaviour in School-aged Children survey carried out in French-speaking schools. Menarche, sufficient levels of physical activity (PA) (global PA: at least 60 min. of moderate-to vigorous-intensity PA daily, and vigorous PA: at least 3 times/week), sedentary week time based on all-screen use duration (SWT; categories based on tertiles), and socio-demographic characteristics were self-reported. Multilevel multiple binary (for PA) and multinomial (for SWT) logistic regressions were performed, stratified by age group (≤ 12.5 years vs. >12.5 years).

Results:

Twenty percent of girls aged $\leq$ 12.5 years and 85.0% of girls aged $>$ 12.5 years have had their first period. Within the group aged ≤ 12.5, post-menarcheal girls were more likely to spend long SWT (≥ 8h/day) than pre-menarcheal girls (vs. short SWT (<4h/day): aRRR = 1.74 [1.27-2.37]; NS for moderate SWT (4-7h/day)). Within those aged >12.5, post-menarcheal girls were less likely to engage in sufficient vigorous PA (aOR = 0.76 [0.59-0.98]) than pre-menarcheal girls. Moreover, they were more likely to spend moderate (aRRR = 1.70 [1.19-2.42]) and long SWT (aRRR = 2.74 [1.94-3.88]) than pre-menarcheal girls of same ages. Additional adjustments for age modified the strength of associations.

Conclusions:

Our results suggest that during adolescence, the physiological changes induced by sexual maturation may contribute to the decline in physical activity (in $>$ 12.5 years), and in the increase in sedentary behaviour in girls. Potential confounding by age will be explored further.

Key messages:

- Development of strategies aimed at improving physical activity among adolescent girls should take into account, among other aspects, pubertal development.
- Specific interventions, targeting pubescent girls, should also be developed to reduce screen time in order to prevent its potential negative consequences.

Placing healthy kids meals on the restaurant menu by co-creation between chef-cooks and children

Kris Bevelander

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Problem:

Eating out is associated with enjoyment, but not healthy meals. The number of families that consume their daily calories from away-from-home foods is increasing. Most restaurants (90%) offer kids meals that are lacking vegetables and are high in calories, sodium and saturated fat. Additionally, families are exposed to many advertisements promoting unhealthy foods and only 3% is aimed at healthy choices.

Description:

The local health authority of the city Nijmegen in the Netherlands started a program (January-June 2019) in collaboration with the local hospital, university, city council, restaurants, primary schools and children's council to promote healthy kids meals in restaurants. Chef-cooks, a dietician and culinary advisor visited the schools they were paired to in their neighborhood to co-create new kids menus. In parallel, students conducted focus groups at schools that could not be visited by the chef-cooks. Information was gathered about which healthy foods children like, and how to present and promote the meals in an attractive way. Next, the children were invited to the restaurants to taste and rate three kids meals created by the input of the children. The winning meals stayed on the restaurant menus for at least a month, while promoting the meals with marketing techniques that were suggested by the children and tested in two experiments: online and in the restaurants.

Results:

During the co-creation lessons at schools, children became more aware of the primarily unhealthy food options in restaurants. Preliminary findings suggest that although most parents would choose unhealthy kids menus in restaurants, healthy meals can be promoted to families by use of characters.

Lessons:

Restaurants are willing to offer and promote healthy kids menus. Co-creation with the target audience and a collaboration between different parties may increase the effect of an environment-level intervention to achieve individual and family-level behavior change.

Key messages:

- Involving children and local parties to increase the availability of healthy kids meals in restaurants and promoting these meals can be an effective way to make eating out a healthy experience.
- A collaboration between different local public and private parties may increase the effect of an environment-level intervention to achieve individual and family-level behavior change.

Study on Children's Health Program and Maternity Health Program, Bulgaria

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Introduction:

The survey was conducted to establish the level access to the Children's Health Program and the Maternal Health Program of the National Health Insurance Fund by marginalized groups. The survey was conducted in the period September-December, 2018 and covered 315 women from Nadezhda neighbourhood (Roma community),Sliven.The methodology used is social accountability and legal empowerment.

Methods:

The survey was conducted through a face-to-face survey. A questionnaire was used with closed and open questions. Consultation with those people was anonymous. We used a ''cold contact' and a ''snowball' method.

Results:

Almost all respondents - 97.7% - have a GP.All (who have the contact of their GP) can easily contact their doctor, although only 7 (2.3%) have the phone number of their GPs. Almost 90% pay part of the cost of treatment, few are cases of full payment or no payment.Quite low - 40.9% - are the rates of visits to the GP in the first month after birth and the appointed (mandatory and due) examinations. Only 45% were examined in the first month after birth by the testimonies of the respondents. It is imperative to take steps to raise the percentage of mothers who visit doctor's office and receive an examinations.74.2% say they adhere to the children's food-hygiene regime. The remaining 20.95% point out the lack of funds and the poor living conditions in the neighborhood (noise, stopping water, etc.) as reasons for not adhering to the regime. While only about 20% claim to have faced discriminatory treatment (just over 30% say they have not experienced it, and nearly half do not respond), there are indicative responses to discriminatory treatment - division in the maternity ward, offensive speech, etc.

Conclusions:

The study achieves its goals - to provide an adequate picture of maternal access to prenatal and pediatric medical care, as well as the difficulties to ensure maximum care for children.

Key messages:

- Roma children are not treated equally under the Children's Health.
- Roma mothers do not have equal access to the Maternity Health Program.

9.S. Mental health inequalities and care

Diabetes care in individuals with severe mental Illnesses in Israel

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Background:

Cardiovascular disease and risk factors are more common in people with severe mental illness (SMI; schizophrenia, schizoaffective disorders, and bi-polar disorders). For instance, diabetes mellitus (DM) prevalence was reported to be 2-3 times higher, with higher incidence and severity of complications. In 2015, following a reform in mental health services in Israel, services were transferred to the responsibility of the health plans, allowing a comprehensive healthcare. We aimed to compare quality of care indicators and intermediate DM outcomes in individuals with SMI compared to the general population.

Methods:

The Israel national program for quality indicators in community healthcare obtains data from electronic medical records from the four health plans, covering the entire civilian population. In 2017, n = 74,226 individuals aged $\geq$18 years had a registered diagnosis of SMI (prevalence 1.37%). DM prevalence, hemoglobin A1c (HbA1c) testing yearly, and DM control in individuals with SMI were compared with the general population.

Results:

DM prevalence in adults with SMI in 2017 was 14.3%, compared with 9.7% among all Israeli adults (RR of 1.5). rates of HbA1c testing and control (HbA1c<7-8%, depending on age and duration of disease) were similar among DM patients with SMI and the general population (testing: 90.1% and 90.9%; Control: 70.8% and 69.7%, SMI and general population, respectively); Similarly, uncontrolled DM (HbA1c>9%) was observed in 10.8% of individuals with SMI and in 10.0% of the general population.

Conclusions:

Along with the expected excess of DM prevalence in individuals with SMI, quality of care DM indicators rates were alike among those with SMI as in the general population, suggesting non-inferior quality of care. This is consistent with results reported by the British national diabetes audit for England and Wales. However, our results are limited by a possible under-registration or diagnosis of SMI in the Israeli population.

Key messages:

- Higher diabetes mellitus prevalence is observed in individuals with severe mental illness.
- Hemoglobin A1c testing and diabetes mellitus control rates are alike in individuals with severe mental illness compared with the general population, suggesting non-inferior quality of care.

Associations between mental illnesses and acute cardiovascular events and cancers in France in 2016

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Background:

People with a mental illness have higher risks of somatic diseases and higher mortality, but this has been poorly documented in France. We studied the associations between mental illnesses and acute cardiovascular events (ACEs) and cancers in the French national health data system (SNDS).

Methods:

We included all health insurance general scheme beneficiaries $\geq$18 years-of-age in 2016. Mental illnesses (psychotic disorder, neurotic or mood disorder, mental retardation and addictive disorder), ACEs (acute coronary syndrome (ACS), stroke, acute heart failure and pulmonary embolism) and cancers (breast, colorectal, lung and prostate) were identified using algorithms based on long-term disease registry, hospitalization diagnoses and specific drug deliveries. The associations were measured using morbidity ratios standardized by age and gender when appropriate (SMRs).

Results:

ACEs were more frequent in the subjects with a mental illness than in the general population: ACS (SMR: 1.6), stroke (2.3), acute heart failure (1.9), pulmonary embolism (2.4). Similar results were found for each mental illness, except for ACS, which were less frequent in those with a mental retardation (SMR: 0.5) and were not associated with psychotic disorder (SMR: 1.0). Mental illness was also associated with more frequent breast (SMR: 1.3), colorectal (1.3), lung (2.0) and prostate (1.2) cancers, in particular for those with a neurotic or mood disorder (SMRs: 1.3, 1.5, 2.3, 1.2, respectively) and, for lung cancer, those with an addictive disorder (SMR: 2.6).

Conclusions:

Globally, ACEs and cancers were more frequent in patients with a mental illness relative to the general population after standardization by age and gender, which could be related to adverse effects of certain psychotropic drugs or behaviours or risk factors related to the mental illness. Healthcare professionals should be aware of this to more adequately account for the specificities of the patients with a mental illness.

Key messages:

- ACEs and cancers were more frequent in patients with a mental illness relative to the general population after standardization by age and gender.
- Healthcare professionals should be aware of this to more adequately account for the specificities of the patients with a mental illness.

Comorbidity associated with Severe Mental illness (The APNA study)

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People with severe mental illness (SMI) that includes bipolar disorder or schizophrenia die on average 10-20 years sooner than the general population. Poor mental health can negatively affect quality of life and life expectancy more so than having multiple physical illnesses. The division between health services treating mental and physical health often means that patients suffering from both physical and mental conditions are at particular risk of poor care. Although more than 50 million people in the EU suffer multiple from more than one chronic disease, it is not well know the comorbidity associated with severe mental illness.

Methods:

The study is a cross-sectional study within the APNA Study (Navarre primary health care prospective cohort) that included 470942 people over 18 years old in Navarre (Spain). Age, sex, chronic diseases diagnosis and SMI) that includes (bipolar disorder or schizophrenia were extracted. Lineal regression models for the number of chronic disease were computed. Logistic regression adjusted by sex and age, was computed for each chronic disease.

Results:

Adjusting by age and sex, people with SMI have 1.47 (95% CI 1.44-1.50) more chronic diseases than people without SMI. Adjusting by age and sex, persons with SMI have a higher prevalence of comorbidity: OR = 13.29 (95% CI = 12.27-14.36). Patients with SMI have a higher prevalence of asthma OR = 1.41 (95% CI 1.21-1.64), COPD OR = 2.30 (95% CI 2.51-3.35), Type 2 DM OR = 1.50 (95% CI 1.31-1.70) hyperthyroidism OR = 1.63 (95% CI 1.26-2.10), Chronic kidney disease OR = 1.,43 (95% IC 1.10-1.88), Obesity OR = 1.68 (95% CI 1.47-1,92) and Hypothyroidism OR 1.63 (95% IC 1.43-1,85).

Conclusions:

Patients with severe mental illness have a higher prevalence of comorbidity than the general population with an OR of 13.29. Health service should screen patient with severe mental illness for chronic diseases due to their high prevalence and mortality.

Key messages:

- Patients with severe mental illness die on average 10-20 years sooner than the general population this could be to a higher prevalence of comorbidity.
- Health services should screen patients with severe mental illness for chronic diseases due to their higher prevalence.

Piloting Sexual Assault Care Centers in Belgium: Who do they reach and what care is offered?

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Background:

Care for victims of sexual violence is fragmented in Belgium. Therefore, sexual assault care centers (SACCs) were piloted in three cities from November 2017 onwards. The SACCs offer forensic, medical and acute psychological care through a forensic nurse, while vice inspectors perform an interrogation at the SACC for those wishing to report. The nurse coordinates the follow-up care and a psychologist provides mental health support. A quantitative prospective study was carried out assessing the characteristics of SACC patients, the sexual violence they experienced and the care received, in order to inform the national scale-up of the model.

Methods:

Data on SACC patients was routinely collected in the electronic patient files by the SACC personnel between November 1st 2017 and October 31th 2018. Data was analyzed in SPSS.

Results:

Within the first year SACCs were attended by 930 victims. Mean age was 24,5 years (SD = 12.8), and one third were minors. Eighty-eight percent of victims was female and 67% presented for rape. Fifty-seven percent of the assailants were known to the victim. Thirty-five percent of the victims self-referred to SACC, 41% were referred by the police, and 66% of victims attended services within 72 hours. Respectively 75%, 61%, 47% and 68% of victims received medical care, a forensic examination, psychological care and reported to the police.

Conclusions:

Without big publicity the SACCs received a higher than expected number of victims. Expansion of the collaboration with police and targeted communication strategies should further increase the number of victims receiving appropriate care. Qualitative research assessing the acceptability of the SACC model will further inform the scale-up of the model.

Key messages:

- The quantitative study led to a better understanding of the population using the SACCs.
- The study allowed to improve the training of the staff members, adapt the SACC procedures before scale-up and define targeted service-promotion strategies.

Adolescent's substance use and suicidal thoughts in Tunisia

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Background:

Experimentation with substance use is common during adolescence. Substance use may result in many health-related problems and contribute to adolescent suicidal behavior. We conducted this study to examine the relationship between substance use and suicidal ideation.

Methods:

This is a cross sectional study conducted among a representative sample of 2020 adolescents enrolled in Tunisian secondary schools using a self-administered questionnaire.

Results:

The prevalence of tobacco, alcohol and cannabis use was respectively 3.7% (95% CI [2.87%-4.52%]), 4.4% (95% CI [3.5%-5.29%]) and 0.8% (95% CI [0.40%-1.18%]) Overall, 17.0% (95% CI [15.3%-18.6%]) reported having suicide ideation during the past 12 months. Tobacco (Odds Ratio = 2.61; 95% CI = 1.59–4.29), alcohol (Odds Ratio = 2.77; 95% CI = 1.76–4.36), and cannabis use (Odds Ratio = 4.98; 95% CI = 1.85–13.96) were significantly associated with suicidal thoughts among adolescents ($p < 10\text{-}3$).

Conclusions:

This cross study has shown a significant association between substance use and suicidal ideation. This relationship can be bidirectional and suicidal ideation and substance use may affect each other.

Key messages:

- In his study, the prevalence of substance use was relatively low and was associated with suicidal ideations.
- The reciprocal link between the two problems and their co-occurrence should be taken into account when planning preventive substance use and suicide programs.

Suicide mortality and its income-based inequalities in Korea, 2005-2017

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Backgrounds:

The suicide mortality rate in Korea has been the highest in the Organization for Economic Co-operation and Development countries between 2003 and 2016. The trends of suicide mortality and its inequalities according to socioeconomic positions provide important information in establishing suicide prevention policies. This study investigated trends in suicide mortality and its income-based inequalities in Korea between 2005 and 2017.

Methods:

Data from 2005-2017 National Health Insurance Database individually linked with cause-of-death data of Statistics Korea were employed. A total of 164,412 suicidal deaths from 574,610,162 subjects aged 10 or over were analyzed. Age-standardized suicide mortality rates were calculated by the calendar year, sex, and income quintiles. The slope index of inequality was calculated as an absolute measure for inequality and relative index of inequality was used as a relative inequality measure.

Results:

The suicide mortality in Korea increased from 29.3 per 100,000 in 2005 to 33.3 in 2011, then decreased to 23.1 in 2017. Suicide mortality rates in men were more than twice as high as the rates in women and the gender gap remained throughout the period. The lower income-level, the higher the suicide mortality rate, especially in men. The absolute inequality in suicide measured by the slope index of inequality has changed as the suicide mortality rate fluctuated, but the relative inequality in suicide has increased since 2012.

Conclusions:

The suicide mortality in Korea has increased due to the global financial crisis and copycat suicide following celebrity suicides in 2008, but it has decreased since the paraquat ban in 2011-12. Despite the recent decline in suicide mortality, the gap between income quintiles did not change meaningfully during the study period. In particular, the magnitude of relative inequality has increased. Progressive national policies should be implemented to reduce suicide mortality and its income gaps.

Key messages:

- Despite the recent decline in suicide mortality in Korea, the income-based inequalities in suicide did not change meaningfully.
- The magnitude of relative inequalities has increased recently.

Social capital and mental health status among the residents of a neighborhood in Istanbul, Turkey

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There has been an increasing policy making and research for social determinants of health and inequalities in health. In such a framework social capital functions as an intermediate factor at the and it is increasingly investigated in health research. Social capital is defined as a resource that individuals may access through membership in a structure of network with certain values and through sharing these resources reciprocally. The objective of this study is to investigate the association between social capital and mental health status among residents of a small neighborhood on Istanbul.

This is a cross-sectional study that has been carried out in Istanbul with individuals of age 18-65 years old. The study sample included 629 individuals selected by a stratified and systematic sampling process. Data was collected via a self-reported questionnaire including items for sociodemographic information, social capital and General Health Questionnaire. We applied Mann-Whitney U and Kruskal-Wallis Tests subsequent to the normality tests of the distribution, and Chi Square Test for the categorical data. Linear and logistic regression models were used for multivariable analysis.

Men constitute 51.7% of the people. Mean age was 40.1 (sd: 12.7). There was a significant association between social capital and being a woman and deprived neighborhood. In addition higher level of mental distress was significantly associated with lower level of neighborhood trust, social support and the higher level of perception that neighbors would take advantage of the participants when they got the chance. However national level trust and sense of people taking advantage of their neighbors were not significantly associated with mental health status.

Social capital measured via trust and social support at the neighborhood level has been a determinant of mental health status. Efforts for decreasing socioeconomic inequalities should also include efforts to promote social capital.

Key messages:

- Social capital measured via trust and social support at the neighborhood level has been a determinant of mental health status.
- Efforts for decreasing socioeconomic inequalities should also include efforts to promote social capital.

A systematic scoping review to approach the construct of gender discrimination

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Gender discrimination (GD) has been frequently linked to mental health. The heterogeneity of GD definition has led to different assessment methodologies and variation around the analysis of GD. This can affect the study of the association between GD and health outcomes. The main goal of this systematic scoping review is the review of previous studies to operationalize the definition of the GD construct.

Three search strategies were set in Pubmed, CINAHL and PsycINFO. 1st and 2nd search strategies included studies if their main focus was either, the analysis of discrimination perception, triggers of discrimination or the analysis of GD effects and associated factors to its perception. 3rd strategy was focused on the identification of GD questionnaires. The prevalence of GD, factors and consequences associated with GD perception and forms of discrimination were the principal variables collected. Risk of bias was assessed (PROSPERO: CRD42019120719).

A total of 925 studies were obtained and 84 papers included. GD analysis environments were described. 60 questionnaires of discrimination were identified. Prevalence of GD varied between 3.4-67%. Female gender and a younger age were the factors most frequently related to GD. Poorer mental health was the most frequent consequence. Two components of the GD construct were identified: undervaluation (different recognition, opportunities in access, evaluation standards and expectations) and different treatment (verbal abuse and behavior).

GD is measured in several environments and with different methodologies. The two component definition of GD can add order and precision to the measurement, increase response rates and reported GD.

Key messages:

- The heterogeneity in the conception of gender discrimination has led to different ways of assessment and to a great heterogeneity around the analysis of GD perception.
- This operative gender discrimination construct could add order and precision to its measurement, increase response rates and reported GD.

Gender differences in self-reported health - the significance of inequality in domestic work

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Background:

Gender difference in health is an important public health issue. Although biological factors contribute, social processes and living conditions create, maintain and exacerbate health differences between women and men. The aim of this study was to examine if lack of equality in domestic work contributes to the explanation of gender differences in self-reported mental well-being, common symptoms and persistent illness.

Methods:

Population based questionnaire data on co-habiting women and men in Sweden, aged 19-64 years (n = 2666), was used. Division of planning and performing domestic work, satisfaction with division of domestic work and equality in partner relationship, were analysed in relation to health outcomes using binary logistic regression analysis with adjustments for age, income, country of birth, occupational class, weekly hours in paid work and number of children.

Results:

Women, compared to men, showed higher odds (OR) for having low mental well-being, OR 1.35 (1.07-1.70), > 7 common symptoms, OR 1.98 (CI 1.59-2.46) and $\geq$ 1 persistent illness, OR 1.25 (CI 1.06-1.47). When equal partner relationship and planning and performing domestic work were included in the regression, the ORs for mental well-being and persistent illness slightly weakened and decreased to non-significance when satisfaction with division of domestic work were analysed, OR 1.14 (0.99-1.44) and OR 1.18 (0.99-1.39) respectively. Corresponding ORs for common symptoms were almost unchanged throughout the analysis.

Conclusions:

Satisfaction with division of domestic work contributed to explanation of gender differences in persistent illness and notably to differences in mental well-being.

Key messages:

- Inequality in domestic work could contribute to explanation of gender difference in health.
- Satisfaction in division of domestic work is of specific relevance in gender difference in mental health.

10.R. Citizens engagement and patient-centered care

Addressing & understanding citizens' perceptions of homelessness: a cross-European study

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Objective:

Addressing Citizen's perspectives on homelessness is crucial for the design of effective and durable policy responses, and available research in Europe is not yet substantive. We aim to explore citizens' opinion about homelessness and to explain the differences in attitudes within the general population of eight European countries: France, Ireland, Italy, the Netherlands, Poland, Portugal, Spain, and Sweden.

Methods:

A nationally representative telephone survey of European citizens was conducted in 2017. Three domains were investigated: Knowledge, Attitudes, and Practices about homelessness. Based on a multiple correspondence analysis, a generalized linear model for clustered and weighted sample was used to probe the associations between groups with opposing attitudes, adjusted for sociodemographic characteristics.

Results:

The response rate ranged from 30.4% to 33.5% (N = 5,295). Most respondents (57%) had poor knowledge about homelessness. Respondents who thought the government spent too much on homelessness, homeless people should be responsible for housing, people remain homeless by choice, or homelessness keeps capabilities/empowerment intact clustered together (negative attitudes, 30%). Respondents who were willing to pay taxes, welcomed a shelter, or acknowledged homeless people may lack some capabilities (i.e. agreed on discrimination in hiring) made another cluster (positive attitudes, 58%). Older respondents (OR = 0.99; $p = .011$), those living in rural areas (OR = 0.78, $p<.001$), those with a poor level of knowledge about homelessness (OR = 0.68, $p = .007$), and those from France and Poland ($p<.001$) were less likely to report positive attitudes.

Conclusions:

Although it is clear that there is strong support for increased government action and more effective solutions for Europe's growing homelessness crisis, there also remain public opinion barriers rooted in enduring negative perceptions.

Key messages:

- A majority of European citizens reported positive attitudes towards Homelessness.
- There is strong support for increased government action and more effective solutions for Europe's growing homelessness crisis.

Promoting health literacy in seniors through self-reliant groups. Results of the GeWinn intervention

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Background:

Health literacy (HL) has been demonstrated to be limited among adults aged 65 and over. However, evidence-based HL interventions are lacking. The objective of this study was to develop and test a community-based HL-intervention in the fields of health promotion and self-management of chronic diseases among elderly people.

Methods:

A participatory approach was used to develop and implement a 53-weeks program of self-reliant, peer-moderated groups of people aged 60 and over in 14 municipalities in Germany. HL was intended to be improved by promoting of self-management skills, community participation and media literacy. The intervention's effect on HL was measured by using the HLS-EU-16 questionnaire three times.

Results:

Of 183 older adults who completed the HL questionnaire (mean age 69.8, SD 6.74; 20.1% male), 42.3% had intermediate or low levels of HL. A repeated-measures analysis of variance showed statistically significant effects of time on HL scores ($F1.91 = 16.948$, $p \leq 0.01$, eta squared = 0.085) over the one-year period. HL sub-dimensions showed similar results. 87% of the participants would recommend the intervention to other people.

Conclusions:

The results indicate that the structure of the intervention is appropriate to involve older adults in self-reliant working groups to improve HL. This is supported by the high acceptance of the intervention the participants showed. As part of the sustained implementation of GeWinn, special attention shall be paid to reaching out to and engaging vulnerable groups (e. g. elderly people with low socio-economic status, older men, migrants).

Key messages:

- Self-reliant groups in peer-moderation are effective to engage older adults to improve their HL.
- The intervention improved all HL rates and even doubled the amount of participants with excellent HL.

Changing criteria of access to gamete donation: the views of donors and recipients

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Background:

Differences on the use of sexual orientation and marital status as criteria to define access to gamete donation persist in Europe, contributing to the search of cross border reproductive care (CBRC). The lack of international policy and norms on CBRC highlight the need for surveillance to ensure quality and equitable access to reproductive care, namely by assessing donors' and recipients' views. This study aims to analyze the opinion of donors and recipients about the use of marital status and sexual orientation as priority criteria for accessing gamete donation, and its associated factors.

Methods:

Between July 2017 and June 2018, 72 donors and 171 recipients completed a self-report questionnaire at the Portuguese Public Bank of Gametes. Opinion about the use of marital status and sexual orientation as priority criteria was assessed through a 5-point Likert scale of agreement, ranging from ''totally disagree'' to ''totally agree''. Descriptive statistics and multinomial logistic regression were used.

Results:

Most participants disagreed with a priority of access to gamete donation for heterosexual couples (61%) and married women (60%). Participants who agreed with priority to heterosexual couples were more likely to be males (OR = 2.5, CI95% 1.2-5.3) and married or living with a partner (OR = 3.5, CI95% 1.1-10.8). Males (OR = 3.18, CI95% 1.5-6.9) and those with lower white collar (OR = 3.0, CI95% 1.2-7.4) or blue collar occupations (OR = 4.3, CI95% 1.4-13.1) were more likely to agree with priority for married women.

Conclusions:

Donors and recipients agree with equitable access to gamete donation, independently of sexual orientation and marital status. However, a heterosexual marriage hierarchy is particularly observed on male, married/living with a partner, and with lower white or blue collar occupations participants. Policy on reproductive care needs to be especially mindful of equity in access to gamete donation.

Key messages:

- Donors and recipients agree with access to gamete donation independent of sexual orientation and marital status.
- Policy on reproductive care needs to be mindful of equity in access to gamete donation.

'I had no idea what could come'- health care support for AMD in Germany- The patients' view

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Background:

Due to the demographic change visual impairment and blindness in the elderly caused by chronic eye diseases become major public health themes. Age- related macular degeneration (AMD) is one of the most common causes of visual impairment and blindness in older adults above 60 years of age in the western countries, followed by glaucoma and diabetic retinopathy.

Objectives: The purpose of this study is to find out how patients with AMD assess their medical care, tool-based and psychosocial counseling services in Germany.

Methods:

Data was collected by using narrative, semi-structured interviews. A purposive sampling strategy was used to sample the study population with patients with AMD, which is characterized by a variety of different life experiences of the patients. The data analysis followed the principles of grounded theory.

Results:

The interviewed AMD patients were between 72 and 87 years old. Before the patients were diagnosed with AMD, AMD was not known to them and suffering from an unrecoverable disease resulting in blindness, made many of the patients anxious. Patients with AMD complained about missing information about the AMD and its treatment. Tool-related and psychosocial counseling services and their benefits were unknown to most of the patients. Therapy with Anti-VEGF injections gives hope to many patients with neovascular AMD, but at the same time it is associated with a time, psychological and physical strain. The time spent in clinics and practices, the waiting for appointments, the number of examinations and injections, communication problems with the medical staff, information deficits, the injections themselves and their side effects were often severe and nerve-wracking for the elderly.

Conclusions:

New strategies need to be developed to facilitate access to AMD information for patients with AMD, as well as to reduce the time required for medical treatment, e.g. waiting times in clinics and practices.

Key messages:

- Therapy with Anti-VEGF injections gives hope to many patients with neovascular AMD, but at the same time it is associated with a time, psychological and physical strain.
- Patients with AMD complained about missing information about the AMD and its treatment.

Integrating priorities of disadvantaged parents and professionals for community family health

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Background:

Health inequalities persist, and policymakers, researchers and practitioners seek for effective ways to positively impact the health of disadvantaged people. Researchers point to a multi-component program with an integral design including various perspectives and involving different stakeholders. Few studies address the perspectives on health of disadvantaged people themselves. This study describes what parents in a socially disadvantaged situation and professionals working in that community perceived as 1) priority aspects to improve family health 2) barriers and facilitators for health behaviour changes 3) important health program activities.

Methods:

Design: Community-based participatory action research. 10 parents participated in 6 panel meetings. 46 professionals received 4 panel meetings summaries. 18 parents and 25 professionals responded to questions in (panel) meetings and consultation by phone and e-mail.

Results:

(preliminary) 1) Parents' top priorities for improving health were: less stress related to finances and communication with related organizations, followed by a safe place for kids to meet. Of the program financers' aims (reducing tobacco, alcohol use and overweight) reducing overweight got relatively most support of parents. 2) Parents perceived their family financial situation as barrier to behaviours reducing stress and overweight. 3) Program activities related to reducing stress got more support from parents and professionals than activities related to reducing overweight.

Conclusions:

Insight in the perspectives of disadvantaged parents and professionals resulted in a program plan supported by them, aiming to reduce stress and overweight. Most participating parents and professionals committed themselves to invest time in program activities execution.

Key messages:

- Disadvantaged parents perceived reducing stress related to finances as top priority to improve family health. They perceived family finances as barrier to behaviours reducing stress and overweight.
- Community-based participatory action research with disadvantaged parents and professionals can result in an integrated family health program plan with stakeholder support.

Health promotion with older informal caregivers: a demand-oriented organization of support

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Background:

Older informal caregivers are considered to be a growing, vulnerable group with multiple burdens. Existing support programs are rarely used which indicates a lack in meeting the specific demands of the target group. This study was to examine the need for support and the preferred design of support programs for informal caregivers aged 65 years and older.

Methods:

A mixed-methods approach was used to identify types of current support programs and demands regarding health promotion and self-management of older informal caregivers. Therefore, two systematic literature researches and a qualitative survey of German program providers were performed. Furthermore, 16 focus group discussions (FGD) with older informal caregivers as well as three FGD with disseminators in three German cities were accomplished.

Results:

Most support programs found focus on caregiving instead of health promotion. Most FGD participants preferred: social interaction with health promotion activities, programs thematically focusing on relaxation and physical activity as well as consultation meetings. One of the crucial factors of the utilization of support programs is the guaranteed care of the person who requires it simultaneous to an intervention. In general, it was found that informal caregivers prioritize the health of the person in need of care over their own which indicates low self-awareness.

Conclusions:

Support programs combining social interaction with guided health promotion activities seem to be more attractive to informal caregivers than common programs. Those units should especially focus on the low self-awareness the target group shows. Local network structures need to be strengthened to facilitate the development and utilization of support programs.

Key messages:

- Networks of disseminators could facilitate support programs for informal caregivers.
- These programs should contain social interaction, health promotion activities and ensured care of the person who needs it.

The association between frailty and satisfaction with social contacts in the general older population

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Background:

As a result of the demographic evolution, the proportion of older people will continue to increase in the coming decades. Frailty among elderly is one of the important challenges that Europe is facing. From a biomedical, perspective frailty is considered as a clinical syndrome that increases vulnerability. However, the role of social contacts in relation to frailty needs to be investigated. In this study, we assessed the association between frailty and perceived satisfaction with social contacts in a sample of the general older population.

Methods:

This study was conducted on a representative sample of 2364, both institutionalized and non-institutionalized older participants ($\geq$65 years) from the Belgian Health Interview Survey 2018. Frailty was assessed with the instrument used in the Survey of Health Ageing and Retirement in Europe (SHARE) including dimensions of the Fried phenotype: exhaustion, weight loss, muscle strength, weakness and physical activity. The Oslo-3 Social Support Scale (OSS-3) was used to assess perceived quality of social support. Logistic regression was used to determine the association between frailty status and satisfaction with social contacts while controlling for age, gender, region, educational attainment and household composition.

Results:

The prevalence of frailty was 22.8% (95%CI:21.2-24.6). The results showed that elderly who are unsatisfied with their social contacts are more likely to be frail (OR(95%CI):4.65 (2.82-7.66)). In addition, being older $\geq$75 years (OR(95%CI):2.40 (1.68-3.43)), being female (OR(95%CI):2.48 (1.73-3.56)), having a lower education (OR(95%CI):2.57 (1.71-3.87)), living alone (OR(95%CI):1.58 (1.10-2.27)) were associated with frailty.

Conclusions:

Frailty is associated with living alone and being unsatisfied with the social contacts, among older people in Belgium. These findings confirm that the social component should be taken into account in strategies to reduce frailty in the general older population.

Key messages:

- Frailty is associated with living alone and being unsatisfied with the social contacts, among older people in Belgium.
- The social component should be taken into account in strategies to reduce frailty in the general older population.

Organising preventive care and support networks: a need for citizen-centred service delivery

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Background:

There is a growing interest in providing preventive care and support services at a district level (Goodwin, 2014; Kernaghan, 2005) in a citizen-centred way, i.e., accessible, delivered seamlessly, and complying with citizens' needs and capabilities (King & Meyer, 2006). Currently, those citizens who might need it most are not reached and services provided suffer from a lack of coherence (Kodner, 2009; Stange, 2009). This study aims to examine how local authorities organise more accessible and integrated preventive care and support services against reasonable costs at a district level.

Methods:

An exploratory multiple case study approach was adopted. The unit of analysis was the organisation of the preventive care and support delivery process. Policy documents were analysed and 13 semi-structured interviews were conducted with professionals in four Dutch districts.

Results:

Our findings show that three stages of the delivery process should be distinguished, as within each stage a set of specific key design decisions were taken aiming to contribute to easy access and integrated service delivery. These three stages are (a) entrance, (b) exploration of needs and capabilities, and (c) the development of care and support networks. Each case showed a unique constellation of choices on these key decisions, and explicated their motives for organising it in this way. Examples of these key decisions are: the number and location of access points, the number of different professionals involved (indicating the level of (de)coupled process), and the type of professionals involved.

Conclusions:

The results show that different stages and design decisions could be identified across the four cases. These, as well as clear interfaces between the stages, can be regarded as a constellation of choices through which citizen-centred delivery could be enhanced.

Key messages:

- Importance of design decisions in citizen-centred delivery.
- Focus on multi-faceted issue of organising integration within the different stages.

Social inequalities of postpartum depression: the mediating role of social support during pregnancy

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Introduction:

A disadvantaged socioeconomic position (SEP), as well as insufficient social support during pregnancy (SSP) increase the probability of subsequent postpartum depression (PPD). The aim of this study was to quantify the part of social inequalities in PPD due to insufficient SSP and in particular assess the impact relative to women's migrant status.

Methods:

The sample included 15,000 women from the nationally representative French ELFE birth cohort study. Depressive symptoms were assessed at two months postpartum by the EPDS. SEP was constructed as a latent factor explaining educational level, occupational grade, employment during pregnancy, household income and financial difficulties. SSP was characterized by informal support (partner perceived support, frequency of quarrels and paternal leave) and formal support (early prenatal psychosocial risk assessment and antenatal classes' attendance). Causal mediation analyses between SEP, dimensions of SSP and PPD were conducted and stratified on migrant status (categorized as native French, first or second generation migrant or immigrant).

Results:

A disadvantaged SEP and a lack of informal SSP during pregnancy were both associated with an increased risk for postpartum depressive symptoms and a disadvantaged SEP was positively associated with lack of SSP. In immigrant women, a larger proportion of social inequalities in PPD could be attributed to lack of SSP, in comparison to native French women (17.5% vs. 8.8%).

Conclusions:

Both disadvantaged SEP and SSP are risk factors for PPD. We found evidence that disadvantaged women's increased risk for PPD can partly be attributed to limited social support.

Key messages:

- PPD in disadvantaged groups, especially in migrant women, could possibly be prevented early in pregnancy by increasing support from partner and larger family.
- Access to social support health care systems directed towards pregnant women remains low for women with a disadvantaged SEP, especially in migrant women.

Multidimensional assessment for patients with multimorbidity in primary care – first practice test

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Background:

Multidimensional geriatric assessments are important for early detection of functional deficits, thus contributing to healthy ageing. According to the Austrian Health Care Structure Plan, such bio-psycho-social assessments should be implemented in primary care and build the basis for the care of patients with chronic diseases. Aim of the present study was to test the feasibility of a respective tool at Austrian general practitioners (GP).

Methods:

Overall, 16 GP participated in our practice test and conducted the composed assessment in 185 geriatric patients (39% male, Ø82.6 years, Ø8 diagnoses, 9 medications). Data was analyzed using descriptive statistics (SPSS 26.0).

Results:

In 181 tested patients (98%), the assessment revealed at least 1 relevant functional deficit (Ø4, max. 8). Level of care and number of functional deficits correlated (Spearman: 0.3, $p < 0.01$). Defi-cits were mainly found in mobility (55%: Timed Up and Go-Test >20 sec) and activities of daily liv-ing (86% IADL $\leq$ 15/16 points and 72% Barthel-Index $\leq$ 95/100 points). The average time to com-plete and document the functional tests was 34 minutes (min. 14, max. 61, n = 121). Use of the elec-tronic (vs. paper) documentation resulted in a significant lower time requirement of 9 minutes. Re-garding subsequent interventions, 11 GP suggested 121 interventions in 57/185 patients (30.8%); thereby, pharmacological interventions were preferred.

Conclusions:

We conclude that our tool tool is practicable in primary care as the required time is manageable. Uncovering functional deficits per se did not induce adequate interventions (neither in number nor in quality); therefore, medical algorithms are needed that make precise recommendations for subse-quent diagnosis and/or treatment/care.

Key messages:

- Multidimensional assessments are manageable in primary care and reveal functional deficits.
- Subsequent to the assessment, algorithms are important in order to induce a benefit through inter-ventions.

Inequalities in the participation and outcomes of breast cancer screening programs in Valencia, Spain

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Background:

Breast cancer remains the most frequent tumour and first cancer related cause of death in the Valencian Community. Despite most of the population being aware of the existence of breast cancer screening programs (BCSP), there are great differences in uptake that are likely attributed to social determinants. The objective of this study, alligning with SDGs 3 and 10, is to assess inequalities in breast cancer screening uptake, diagnosis and treatment delay in the city of Valencia.

Methods:

The population of study included 128 123 women invited to participate in the BCSP in the city of Valencia between 2014 and 2016. Uptake, diagnosis and treatment delay were assessed as outcomes. Covariates included country of origin, education level, size of family unit, risk of vulnerability, age, presence of disability, assigned health department and a social deprivation index. Bivariate analysis and logistic regression models were performed for each independent variable.

Results:

BCSP uptake was of 63,8% with a diagnostic rate of 5,36‰. 76,7% of patients were below the 75th percentile of delay between diagnosis and treatment (52 days). Statistically significant relationships were found between uptake of BCSP and all studied covariates both in the bivariate analysis and regression model. Presence of disability, family unit size, age and health department had a statistically significant relationship with diagnosis in the bivariate analysis, of which only one health department and the social deprivation index's second quintile remained significant in the regression model. No significant relations were found between treatment delay and any of the covariates.

Conclusions:

Strong inequalities in the BCSP have been identified. Influencing factors must be targeted so as to ensure an egalitarian access to BCSP. Given its multifactorial nature, simple analyses must be avoided in the study of inequalities in breast cancer diagnosis. Data on lifestyle may contribute to future models.

Key messages:

- Social determinants continue to have an impact in the uptake of breast cancer screening programs in the city of Valencia.
- The assessment of inequalities in breast cancer diagnosis cannot be approached uniquely through the analysis of social determinants and may Benefit from the inclusion of data on lifestyle choices.

Evaluation of ''Sophia Diabetes'', a diabetic patient support programme, 8 years after its initiation

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Background:

''Sophia Diabetes'' is a personalized diabetic patient support program piloted by French National Health Insurance, launched experimentally in 10 primary health insurance funds in March 2008, extended in 2010 and then generalized to all of France in 2012-2013. A new evaluation was performed in 2018 to determine long-term (2008-2016) improvement of medical follow-up indicators, impact on morbidity, mortality and healthcare expenditure.

Methods:

A sample of patients (n = 49,016) eligible for the programme in 2008, but also a sub-group of participating patients (n = 17,007), was matched, using propensity score, with controls randomly selected from the SNDS. Difference in difference method was applied for comparisons at each year of follow-up (Ti) while controlling for differences between populations.

Results:

Sophia had a significant positive impact on recommended follow-up indicators, right from the first year. This improvement was maintained for most indicators even if compliance rates remained lower than targets. Sophia Diabetes does not appear to have a major impact on hospitalization rates in either eligible patients or participating patients. However, comparison between participants and controls revealed a less marked increase of hospitalizations for major cardiovascular events at T6 and T7. Compared to their controls, a better use of hospital emergency departments was observed for participants. Ambulatory care expenditure of participants increased more markedly between T4 and T7 (+€105 to €233), related to a better follow-up but in contrast, hospital expenditure increased less markedly during the first year of follow-up (-€139) and the last 2 years (-€360 to -€380).

Conclusions:

For the first time in France, a disease management program has been evaluated over a long period. Globally, Sophia programresults in improved patient follow-up, decreased emergency visits, and a less marked increase of hospitalizations for major cardiovascular events at the end of period.

Key messages:

- First long term evaluation (8 years) of a disease management program in France.
- Sophia diabetes management program shows a positive impact on some follow-up and morbidity indicators.

10.S. Patients, risks and healthcare

Evaluation of the 'sophia' asthma patient management program at two years

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Objectives:

To evaluate the impact of a multi-faceted management support program deployed towards asthma patients by the French Health Insurance since February 2015 in 19 (20%) French pilot areas. **Methods:** The population is composed of subjects aged 18 to 40 years in 2014, with at least 3 asthma medication deliveries in 2012 as well as in 2013 that were identified and followed-up within the SNDS French claims database. A controlled before-and-after design was used for assessing program impact. Unexposed subjects (i.e. living in non-pilot areas) were matched with exposed subjects (i.e. living in pilot areas) on a propensity score. Adherence to controller treatment (inhaled corticoids), measured by the medication refill adherence MRA, was the primary outcome. Secondary outcomes were medications and heathcare use, sick leaves, exacerbations, costs.

Results:

Analysis concerned 29, 746 matched-pairs. With a baseline mean MRA of 40.17% in unexposed subjects, the difference-in-difference was non-significant (0.26%, p = 0.545). However, the program showed a significant impact on the percentage of subjects that moved to a better MRA category or maintained a high adherence (OR = 1.05,p = 0.028). The program had no significant impact on the other secondary outcomes. In planned secondary analyses comparing the 11.5% exposed subjects who adhered to the program to their matched-unexposed subjects, the difference-in-difference showed a program impact on specialist consultations, asthma-related and all medication costs, and total asthma-related costs. However, results on this subpopulation must be examined with caution since the matching procedure couldn't take into account the propensity to adhere.

Conclusions:

Although SOPHIA had no impact on the MRA as a continuous variable, more exposed subjects moved to better adherence categories. The program had an impact on asthma-related costs in the adherents to the program, but this result should be considered with caution.

Key messages:

- Although SOPHIA had no impact on the MRA as a continuous variable, more exposed subjects moved to better adherence categories.

- The program had an impact on asthma-related costs in the adherents to the program, but this result should be considered with caution.

Use of medical care in the 7 years before dementia in the French health insurance database in 2016

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Background:

The entry into dementia is a period of growing interest for clinical trials and public health policies. We described the frequency of medical care use in the 7 years prior to the first dementia identification (index date).

Methods:

All French health insurance general scheme beneficiaries aged 65 or more with an incident dementia in 2016 (identified through long-term disease registry, hospitalization diagnoses, or specific drug delivery), were matched with beneficiaries without dementia of same age, gender, area of residence. The annual cumulative incidences (ACI) of visits (GP and specialists, including outpatient hospital visits) and hospitalizations were estimated over 7 years (Y-7 to Y-1 before index date), by age (65-74, 75-84, 85-89, 90+).

Results:

Among 274166 subjects (median age 84, 65% women), the ACI of GP visit was stable and similar between cases and controls, around 95%. The ACI of neurologist, psychiatrist and internist visit and of hospitalization in a psychiatric unit increased in cases, especially in Y-1. They were higher than in controls in the youngest age classes. The ACI of visits to a dermatologist, a rheumatologist, an ophthalmologist, a dentist and for women a gynecologist, were lower in cases than in controls, with an increasing difference in the last years before dementia care. Similar patterns were observed in the oldest exclusively (generally $\geq$85 yo) for pneumologist, cardiologist, nephrologist, and in a lesser extent, endocrinologist visit. The ACI of hospitalizations increased with time in both groups, with a peak in Y-1 in cases. They were higher in cases than in controls in the youngest age classes.

Conclusions:

The increase in hospitalization rate in Y-1 suggests a decline in clinical status leading to the diagnosis or a weakening at the time of entry into dementia. The lesser use of a specialist other than neurologist or psychiatrist suggests a focus of care around dementia, possibly to the detriment of the care of comorbidities.

Key messages:

- As most patients visit their GP at least yearly, specific GPs training could help to make a timely diagnosis of major neurocognitive disorders.
- The lesser use of a specialist other than neurologist or psychiatrist suggests a focus of care around dementia, possibly to the detriment of the care of comorbidities.

Effect of drug compliance on health care costs in newly-diagnosed dementia: a nation-wide analysis

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Background:

The cost-effectiveness of both cholinesterase inhibitors and memantine by delaying nursing home placement has been supported by numerous studies. The importance of sustained pharmacological treatment in dementia has been relatively less recognized by public health policies compared to early diagnosis. We investigated the effect of the drug (donepezil, rivastigmine, galantamine, and memantine) compliance on the health care costs in newly-diagnosed dementia.

Methods:

National Health Insurance Service (NHIS) database which covers the entire population of South Korea was used for analysis. Health care expenditure of patients newly-diagnosed with dementia in between 2012 and 2014 was investigated for 3 to 5 years. For drug compliance, we used Medication Possession Ratio (MPR) that indicates the percentage of time a patient has access to medication. Multivariate linear regression analysis including generalized estimated equation and gamma distribution was used for statistical analysis.

Results:

We identified 252,594 patients who were both prescribed with cognitive enhancers and newly diagnosed with dementia. When initial MPR increased 20%, total health care costs decreased 8.4% (RR = 0.916, 95%; CI 0.914 to 0.916). Same relationship was shown with medical costs related to dementia, admission to a general hospital, and emergency room visits. When MPR increased 20% compared to the previous year, the total health care costs, admission to a general hospital, emergency room visits, and admission to a nursing hospital decreased.

Conclusions:

This population-based retrospective cohort study provides evidence that patients newly-diagnosed with dementia who showed higher initial drug compliance or maintained anti-dementia drugs (Cholinesterase inhibitors and memantine) would benefit in total health-care costs.

Key messages:

- Public health care policies should not only focus on early diagnosis in dementia, but also recognize the importance of adherence to cognitive enhancers.
- To maximize the positive pharmacoeconomic effect of early diagnosis of dementia, it is important to sustain adequate drug compliance to cognitive enhancers.

Outpatient health care 30 days after hospitalization for heart failure in France

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Background:

Recommendations for heart failure (HF) outpatient follow-up have been published. The SNDS offers the opportunity to confront them to real-life, including geographical disparities. Moreover, estimation variation has to be explored when population excludes institutionalized patients (IP) that have specific healthcare use and refund: rehabilitation (SSR), psychiatric hospitalization (psy), skilled nursing home (EHPAD) which is not usually done.The Purpose is to study outpatient healthcare use variations in France after hospitalization for HF, using SNDS data.

Methods:

The first stay for HF (>0days) in 2015 of patients over 18 yo covered by the general scheme (RG/SLM 88% of population) was considered. Healthcare use 30 days after was compared with (RG/SLM) or without IP (RG/SLM eIP). Regional outpatient care use rates were standardized by age and sex.

Results:

Among 104 984 alive patients 30 days after HF hospitalization (RG/SLM, female 52%, mean age 79 yo), 16% stayed in SSR, 9% in cardiologic SSR, 12% in EHPAD, 0.2% in psy and 75% returning home and not institutionalized (RG/SLM eIP; n = 70367). Among all RG/SLM patients vs RG/SLM eIP (mean age 79 yo vs 78 yo), a cardiologist was seen at least once in 30 days post hospitalization 20% vs 21% (median delay 14 days IQR 7-23 vs 16 IQR 9-24), a general practitioner 69% vs 78% (8 IQR 3-16 vs 7 IQR 3-15), a nurse 58% vs 69% (3 IQR 1-9 vs 2 IQR 1-7). ACE inhibitors were reimbursed at least once for 34% vs 39%, ARBs 14% vs 17%, and diuretics 69% vs 77%. Among RG/SLM eIP patients, departmental disparities were high: cardiologist (3% to 46%), GP (59% to 93%), nurse visit (49% to 82%). Lower rates for GP were found in the center of France but with higher rates for nurse visits.

Conclusions:

We recommend using RG/SLM eIP when studying outpatient healthcare use in the SNDS. Low visit rates and high delays regarding the recommendations point out the need of a multidisciplinary community health care in France.

Key messages:

- Low visit rates and high delays regarding the recommendations point out the need of a multidisciplinary community health care in France.
- We recommend using RG/SLM eIP when studying outpatient healthcare use in the SNDS.

Patient safety culture in Austrian hospitals – A qualitative study

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Background:

Adverse events in the healthcare system often have severe consequences for the patient and healthcare institutions. Thus, various risk management tools have been recently introduced to 11 Austrian hospitals to increase patient safety. The goal of our study was to test whether the introduced risk management tools actually improved patient safety culture (PSC).

Methods:

An exploratory research approach was used to examine the current status of five aspects from PSC in hospitals. Semi-structured expert interviews with health professionals were conducted (N = 32). The inductive content analysis and technique of content structuring were used to analyze and systemize extensive qualitative data material. Intercoder reliability ($\kappa = .605$) shows satisfactory results.

Results:

The results of the first aspect, Critical Incident Reporting System (CIRS), show that hospitals still have potential for improvement in terms of education of employees, coordination, and communication. The data of the second issue, surgical checklist, shows that the education was insufficient and that these checklists are not handled properly and used only fragmentarily. Concerning the third aspect ''transfer/report'', it can be stated that systematic transfer/reports are widely unknown. Furthermore, the fourth aspect, hand hygiene, lacks a systematic training concept and control of compliance. The fifth aspect, education of risk manager, has brought a number of general benefits (e.g. methodical knowledge) to risk managers.

Conclusions:

The results provide valuable insights into strengths and weaknesses of the implementation of risk management tools and thus highlight opportunities on how to influence PSC through organizational development and change management. Furthermore, this study has taken the first essential step towards the understanding of the effective and efficient development of PSC by providing valuable insights into the underlying mechanisms of non-functioning PSC.

Key messages:

- The study showed where the weakness points in processes of implementing risk management tools are and offered a theoretical solution for the development of a patient safety culture.
- Risk management tools were not equally effective in every controlled aspect. The effective implementation of these tools requires change management as a foundation to develop PSC.

Significant improvement in cancer management in Europe

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Background:

Cancer management represents one of the most complex disease management segments in health care. Quality National Cancer Control Programmes (NCCPs) play the key role in cancer management in responding to population needs by preventing, detecting and treating cancer only through adequate planning. An effective NCCP represents benefits for patients, citizens, health care providers, health systems and governments. Europe is still characterised by inequalities in cancer control both between and within countries. In response to this challenge, a generic list of evidence-based tools for efficient stewardship and measure of effects of the cancer control will be prepared.

Methods:

A survey on the current state of NCCPs in EU Member States, EEA countries and EU candidate countries and on the presence of some key elements, which NCCPs should include, was conducted in 2018 in the frame of the Joint Action (JA) Innovative Partnership for Action Against Cancer (iPAAC). The completed surveys were analysed; the answers were compared with the report prepared on the basis of the survey carried out in 2011 in the frame of JA EPAAC.

Results:

In total, 33 out of 34 EU Member States, some EEA countries and EU candidate countries completed the survey, the response rate was 97%. Thirty-one out of 33 countries reported that they have a NCCP or another relevant cancer document. Belgium does not have a NCCP, Croatia and Serbia prepared draft versions. The inclusion of patient pathways, quality indicators as well as PROMS in NCCPs is not satisfactory. Only 10 countries included PROMS in their NCCP.

Conclusions:

On the basis of the preliminary results of the survey we conluded that the situation regarding NCCPs in Europe improved in comparison with the situation in 2011. EU countries have mostly adopted a NCCP, plan or strategy as a single or several documents. We aim at developing practical instructions for the successful governance and steering of cancer care in all EU Member States.

Key messages:

- The development of NCCPs represents added value for cancer patients in all EU Member States.
- The inclusion of patient pathways, quality indicators as well as patient reported outcome measures (PROMS) in NCCPs/cancer documents is not satisfactory.

Anaemia under-reporting in a hospital setting in Italy

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Background:

Anaemia is a common occurrence in the general population, affecting nearly one in three people worldwide, with peaks in the elderly and those with chronic diseases or micronutrient deficiency.

If recognised, anaemia can often be treated through micronutrient administration, thus an early recognition of the disorder has a significant return in terms of Public Health and of investment.

Methods:

Hospitalisation records from a large sample of ordinary admissions over a year (2016) were retrospectively analysed, in order to assess the impact of hospital stay on anaemia prevalence, defined according to WHO criteria. Prevalence was estimated by both haemoglobin levels and anaemia-related description codes (ICD9CM) at discharge.

Furthermore, the main diagnoses associated with loss of haemoglobin were investigated, using binary logistic regression.

Results:

Over the 15,624 ordinary admissions, we found the prevalence rate of anaemia was 47.2% at hospital admission, increasing to 63.9% at discharge.

During hospital stay, a mean reduction of 0.323 g/dl ($SD \pm 1.39$) haemoglobin was recorded, in particular those with neurological, circulatory, and haematological diseases ($p < 0.001$). By comparing the two diagnostic criteria, a great under-reporting occurred in 85.3% patients with haemoglobin levels predictive for anaemia at hospital discharge.

Conclusions:

Our results highlight the importance of correctly identifying anaemia in the hospital setting as a main Public Health concern. Since haemoglobin loss is recorded during hospital stay, we propose measuring haemoglobin levels not only at admission, but also at discharge, and to enhance proper ICD9CM code inclusion in discharge records. The achievement of both these good practices would have a double effect: to properly inform all the stakeholders and to allow more than half hospital patients, those with haemoglobin levels predictive for anaemia but without specific ICD9CM code at discharge, to be cured in the proper setting.

Key messages:

- Anaemia often remained misidentified during hospitalisation, thus inducing a decrease in mean inpatients haemoglobin levels and a consequent increase of anaemia prevalence at discharge.
- Despite this worsening during hospital stay, a significant underreporting was recorded: 85.3% patients with Hb levels predictive for anaemia at hospital discharge had no specific ICD9CM code.

Preoperative evaluation of patients receiving bariatric surgery: a comprehensive Breton study

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Background:

With large demonstrated benefits, volume of bariatric surgery (BS) has increased almost threefold since the late 2000s in France. However, patients seeking for BS must be carefully preoperatively evaluated to reduce risks for late complications (nutritional, neurological and psychiatric). This study aimed to assess preoperative evaluation of BS according to French recommendations.

Methods:

The preoperative evaluation (gastrointestinal, nutritional, cardiovascular and psychiatric) during the year preceding BS was assessed from the French national health insurance database. All patients with a primary BS in Brittany in 2015 were included. For each patient, a score of preoperative evaluation was carried-out (from 0 to 6) and classified as follows: ''complete'' (6), ''incomplete'' (4-5), ''unsatisfactory'' (2-3) or ''poor'' (0-1). Comparisons (chi-square tests) by sex, geographical department, type of institution and health professionals (HP) were made.

Results:

Among the 1,446 patients finally included, 1,195 (83%) were women and the median age was 42 (quartiles: 33-51) years old. Gastric by-pass (66%) and sleeve-gastrectomy (33%) were the most performed procedure. The preoperative evaluation was classified as 'complete' for 501 (35%) patients, 'incomplete' for 647 (45%) patients, 'unsatisfactory' for 238 (17%) patients, and 'poor' for 60 (4%) patients. Better scores were found in 2 departments (Côtes d'Armor and Finistère, $p < 0.001$), in public institutions ($p < 0.001$) and in institutions performing 50 or more acts per year ($p < 0.001$). Heterogeneity according to the HP was also noted in private institutions (median score per HP: 4.5, min-max: 2-6).

Conclusions:

This large regional comprehensive French study confirms that preoperative evaluation before BS is not optimal despite clear French recommendations. Collective reflection should be led to improve the pathway of care of patients seeking BS.

Key messages:

- There are disparities in the performance of BS's preoperative evaluation in Brittany.
- This work suggests that preoperative evaluation for patients seeking for BS should be improved and standardized.

Evaluation of observation of the patients with coronary heart disease after surgical treatment

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Background:

To reduce mortality from cardiovascular diseases in Kazakhstan, which occupies the leading position, patients are under observation. To evaluate of patients with coronary artery disease who have undergone myocardial revascularization by installing coronary artery stenting or bypass surgery.

Methods:

A retrospective analysis of outpatient medical records of patients.

Results:

Analysis included medical records of 4% patients at the age of 40-49 years, 49%-50-59 years, 22%-60-69 years, 11%-70-79 years, 4% patients older than 80 year. 92% patients were admitted to the hospital with acute coronary syndrome and were urgently operated. Patients with chronic heart failure were operated routinely. 12% patients received surgical treatment twice, including 4% patients routinely. All patients had comorbidities: 63% of people-arterial hypertension, 12%-cardiac arrhythmia, 14%-diabetes. The analysis showed that only 51% of patients were regularly observed in accordance with the standards of the survey during one year of observation. According to the standards the scheduled ECG study of the patients after surgery should be done after 1, 2, 3 and 6 months. In accordance of the standard 23% patients were examined, 3 times a year - 19% patients, 23% people-twice a year. Other functional studies-echocardiography 1 time per year have been studied on 14% people, treadmill test-5% patients. Coagulation monitoring during one year- 46% patients. One of the criteria of proper observation is the number of readmissions. 11% patients were readmitted where 5% of them in the first month after surgery-6% patient with hypertensive crisis, 11%-with an increase of CHF, 2%-with postoperative pleural effusion. 2% patients hospitalized with restenosis after 7 months.

Conclusions:

It should be noted that irregular visits to the doctor questioned the compliance of patients to treatment. Due to the lack of control by medical workers, the patients were not fully examined.

Key messages:

- The continuity of work between hospital doctors and primary care organizations is necessary.
- Patients to improve the favorable prognosis requires regular medication.

Health-related quality of life and risk of hospitalization in a healthy general population

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Background:

The association of health-related quality of life (HRQL) with total and cardiovascular (CVD) hospitalization was assessed in a population-based cohort of apparently healthy subjects; several pathways possibly accounting for such associations were also tested.

Methods:

Longitudinal analysis on 16,849 subjects free from CVD and cancer from the Moli-sani Study, Italy (2005-2010). HRQL was performed by the 36-Item Short Form Health Survey including both mental and physical domains. First hospital admissions were recorded by direct linkage with hospital discharge form registry. Hazard ratios (HR) with 95% confidence interval (95%CI) were calculated by multivariable Cox-regression.

Results:

Over a median follow-up of 7.3 y, 6,061 all-cause, 1907 CVD, 431 IHD and 294 stroke hospital admissions were ascertained. The highest quintile of mental HRQL was associated with 23% (95%CI: 17% to 29%), 26% (15% to 36%) and 30% (5% to 48%) lower risk of total, CVD and IHD admissions to hospital, respectively, as compared to the lowest.

Risk estimates for physical health were 0.60 (0.56-0.65 for Q5 vs Q1), 0.57 (0.50-0.65) and 0.73 (0.55-0.97) for total, CVD and IHD hospital admissions, respectively. A downward trend with stroke hospitalizations was found for both mental and physical HRQL. Healthy behaviours explained up to 13% of the association between mental HRQL and IHD risk; inflammatory markers (i.e. C-reactive protein and white blood cell count)) accounted for a significant proportion (34%) of the association of physical HRQL with IHD hospitalizations.

Conclusions:

In a large sample of disease-free subjects, not only physical, but also higher mental HRQL is associated with lower risk of total and CVD hospitalizations.

Key messages:

- HRQL adds meaningful information beyond traditional risk factors to the prediction of hospitalization.
- HRQL assessment may be useful in stratifying hospitalization risk among a general population of healthy adults.

Predictors of in-hospital mortality post hip fracture in Ireland 2013-2017

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Background:

Hip fractures are associated with considerable mortality, morbidity and healthcare expenditure. There are approximately 3,500 hip fractures in Ireland per annum with this figure set to increase considerably over the coming years due to the ageing population. Internationally, mortality following hip fracture is approximately 10% at 1 month and 30% at 1 year, with less than half of survivors regaining their preoperative level of function. The authors aimed to identify the determinants of in-hospital mortality post hip fracture in the Republic of Ireland 2013-2017, with specific reference to the Irish Hip Fracture Standards.

Methods:

A secondary analysis of 15,603 patients in the Irish hip fracture database was conducted.

Results:

31% (n = 4,769) were male and 69% (n = 10,807) were female. Mean age for males was 75 years (SD 13.5) and 79 years for females (SD 10.5). The largest proportion of hip fractures occurred in the 80-89 age category, with 72.3% (n = 4,600) of these being female. Median in-hospital mortality was 4.7% (n = 711) (Range 2.7-6.2). Univariate logistic regression revealed 11 statistically significant predictors of in-hospital mortality; however, only 4 remained statistically significant on multivariate analysis [mobilised day of/after surgery (OR 1.46, 95% CI 1.25-1.70, $p < 0.000$), pre-fracture mobility (OR 0.84, 95% CI 0.79-0.89, $p < 0.000$), gender (OR 0.56, 95% CI 0.41-0.76, $p < 0.000$) and age (OR 1.05, 95% CI 1.03-1.06, $p < 0.000$)].

Conclusions:

Older males with poor pre-fracture mobility who were not mobilised the day of/after surgery had the highest risk of in-hospital mortality. The ability to be mobilised on the day of/after surgery is a good composite measure of both patient and organisational factors in hip fracture care. This research supports the inclusion of mobilisation on the day of/after surgery as a new formal best practice standard.

Key messages:

- Patients not mobilised on the day of/after surgery are 46% more likely to die in hospital. In-hospital mortality of 4.7% in Ireland is comparable internationally.
- None of the IHFSs significantly influenced in-hospital mortality after multivariate analysis, but may well affect other outcomes such as ability to return home.

Avoidable hospitalization in Milan's metropolitan area: inequalities and comparison with OECD cities

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Background:

The largest cities on the world face the unprecedented challenge of meeting the needs of a population that lives longer, has declining birthrates, and is altering the demographic profile on which social welfare programs have long been premised. This work is part of an international project aimed at comparing health and social care systems in megacities worldwide. We study access to healthcare in the metropolitan area of Milan to quantify avoidable hospital care and social inequalities within this world city, and compare Milan with other OECD megacities.

Methods:

Two sources of data are combined: individual-level hospital discharge data to measure hospitalization for ambulatory-care sensitive conditions (ACSC), and municipality-level data collected from the national office for statistics. First, we performed an ecological analysis using a linear model for ACSC hospitalization rates to detect the risk factors in the municipality where the patient resides. Then, to identify both individual and area-level variations in population health, we use multilevel logistic regression model.

Results:

Age-adjusted ACSC hospitalization rates continuously declined from 2005 to 2016, from 16% to 10.7%. Municipality-level risk factors include proportion of residents aged 65+ and proportion of foreigner residents. The individual-level predictors of ACSC hospitalization include being male, being single, having co-morbidities and low education. This association is only modestly attenuated when patient's area-level characteristics are accounted.

Conclusions:

We observed declining trends in ACSC hospitalizations and identified some patient's as well as area-level characteristics related to avoidable hospitalization. Understanding whether ACSC hospitalization has dropped due to improvements in population health and access to healthcare or as part of the overall reduction in hospitalization rates needs to be further explored.

Key messages:

- Effective primary care can reduce hospitalization for preventable and chronic conditions. This work identifies individual and ecological factors related to avoidable hospitalization in urban settings.
- Policies to improve access to healthcare, tackle inequalities and reduce hospitalization costs may be more effective if targeted on individuals considering and the environment in which they live.

Attitudes and behaviours of theology faculty students on organ donation An Eastern City Of Turkey

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Background:

Transplantation is the process by which a solid tissue or organ from a living donor or cadaver is transplanted to replace an organ that cannot function properly in the body. Religious beliefs of individuals affect their attitudes and behaviours regarding organ donation. The aim of the study is to determine the knowledge, attitudes, behaviours of Theology Faculty students about organ donation.

Methods:

The study is cross-sectional study which carried out on students in Faculty of Theology.Total number of students was 800 at the time of study. Sample selection was not performed in this study,70% of the population was included. The first part of the questionnaires, which we created as data collection tools, comprised socio-demographic questions, whereas the second part comprised questions, prepared according to the literature that measures the knowledge, attitudes and behaviours on organ donation. Chi-square test was used for statistical analysis.

Results:

0.7% Of the students participating in the study stated that they were organ donors, whereas 56.4% said that they considered organ donation as religiously appropriate behaviour, and 38.6% said that they have not become organ donors before because the subject of organ donation was not brought to their attention previously. A comparison of whether the students viewed organ donation as religiously appropriate behaviour with the students' level of knowledge on organ donation revealed to be 65.8% among students with knowledge on organ donation and 49.5% among students who lacked knowledge on organ donation($p < 0.05$).

Conclusions:

The ratio of organ donors among the participants was 0.7%. Students with knowledge on organ donation also said that they viewed organ donation as religiously appropriate behaviour. Through training activities, the aim should be to increase the level of knowledge and awareness on organ donation of future religious staff and to thereby increase the level of organ donation in the society.

Key messages:

- The ratio of organ donation among Theology Faculty students is low.
- The subject of organ donation should be added to the curriculum of Theology Faculty students.

5. POSTER DISPLAYS
DA Solidarity in health

Analysis of the free caesarean section initiative at the Nabil Choucair Health Center

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Introduction:

The initiative for free caesareans was officially launched in December 2004. Our study, with The overall objective of contributing to an evaluation of the impact of this initiative on the operation of the Nabil Choucair Health Center (NCHC) will strengthen its implementation.

Methods:

This is an analytical, cross-sectional, quantitative and qualitative study conducted from September 1 to October 31, 2017 at NCHC. It focused on four target populations: providers, beneficiaries, members of health and co-management committees, and those responsible for maternity and the laboratory. Data entry and analysis were performed with the Excel software and EPI Info version 3.3.2.

Results:

The survey involved a total of 135 beneficiaries, 55 providers, 11 co-management committee members, 2 health committee members, the manager, the laboratory manager, and the chief medical officer of the community. maternity. The average age of the beneficiaries was 29.31 years. The media represented the main source of information with 52%. Despite the free cost of drug expenditure was 40039 FCFA. The average waiting time was 5 hours. The most frequently mentioned problems were: delay in repayment, influx, debt of the structure, abuse of benefits, breakage of reagents and / or drugs. At NCHC 33% of deliveries are by caesarean section. The rate of caesarean section in population has increased from 4% to 8% with free delivery.

Conclusions:

It seems appropriate to make recommendations for the referral of providers on free caesarean section, for the management of cesarean section, for reorganization of services and for the improvement of the quality of reception.

Key messages:

- Caesarean.
- Universal health coverage.

Developing international inter hospital cooperation to reach the SDGs

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Background:

The current epidemiological transition creates news issues to address (NCD as oncology, cardiovascular, diabetes, road accidents...) and causes an important increase of skills transfer needs in resource-poor/intermediate countries. Hospital cooperation is an efficient way to help the partner country/city adapt and increase their quality of care.

Objectives:

The aims were multiple: set up transfer skills programs, but also understand both obstacles and success factors of such projects over the long term. AP-HP's (Greater Paris University Hospitals) Department of International Relations, has developed 3 year-long projects (financed in majority by public funders) which link one or more hospitals of our group to a southern hospital, on a precise topic. Our multidisciplinary teams then support the local professionals either by training them or assessing their current situation and proposing an action plan.

Results:

Over those last 4 years, we built more than 50 cooperations, most of them being successful and still active today. 20 of our hospitals have been involved in at least one project. In 2018, we were working with more than 30 different countries. We noticed a growing interest both from our teams and new partners, over the years. In 2018, around 150 healthcare professionals from AP-HP took part in at least one mission abroad and more than 3 000 foreign professionals have been trained in various ways (from conferences to technical surgical skill transfer), including about 50 trained on site in Paris. These trainings are intended not only to physicians but also for midwives, nurses and managers.

Conclusions:

Those projects have a good efficiency in a short term. Therefore, the risk of unsustainability is quite important. For the programs to be effective in the long run, there needs to be a collective involvement both from institutions and healthcare teams in the project on both sides.

Key messages:

- European hospitals should develop a strong international cooperation policy.
- AP-HP intends to intensify its work, being an efficient way of contributing to reach both SDG 3 and 9.

Accessibility to oral health care of precarious and non precarious populations in Côte d'Ivoire

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Introduction:

The purpose of any health system is to guarantee access to care for the entire population served. However, the socio-economic insecurity situation of people in precarious situations, raises the problem of their access to oral health care considered to be expensive. The objective of this study was to compare the dental status and modalities of oral health care use by people in precarious situations to group of non-precarious population in Abidjan, in Côte d'Ivoire.

Methods:

The cross-sectional study was conducted at the University Hospital Center of Treichville. It concerned all users of the dental office of this hospital. Subjects in precarious situations were identified using a screening tool. Was considered to be in a precarious situation, a person living with less than 1.5 USD/day, having no fixed address, looking for a job, having no health insurance or having difficulties in dealing with medical and pharmaceutical costs. We have identified variables for the modalities of oral health care use and follow-up. The frequencies of these variables were calculated and comparisons were made between subjects in precarious and non- precarious situations using the Chi2 test.

Results:

256 people participated in the study. The tool for identifying precariousness made it possible to distinguish 128 subjects classified in precarious situations and 128 others in non-

precarious situations. The number of missing teeth in people in precarious situations was twice as high as in non-precarious subjects. Renunciation of dental care was more common in the precarious group (46%) than in the non- precarious group (32%). Absenteeism rates at the first two appointments were higher among the precarious (54%) than among the not precarious (46%).

Conclusions:

These results show the need to sensitize the population on the importance of oral health and the establishment of social protection mechanisms to ensure greater accessibility to care for people in precarious situations.

Key messages:

- Improving the oral health of populations, especially vulnerable population groups, requires the establishment of social protection mechanisms to remove the financial barrier to access to care.
- Educating the public about the importance of oral health for overall good health is essential to improving the use of dental care.

Building bridges between community, primary healthcare and academia for solidarity in health

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Considering Astana declaration on Primary healthcare (PHC) and universal healthcare coverage UN member countries agreed on committing for PHC development. Kazakhstan prepared legal basis for that during ongoing healthcare system reform. Meanwhile, there is no clear mechanism for integration of sectors to address person and community centeredness for health, which has emerged into a need of rethinking engagement between outpatient clinics and their communities. Local NGO "Community health committee" has led the bottom-up initiative in collaboration with Kazakh National Medical University, Outpatient clinic of Almaty State hospital #5, Medeo district mayor's office and WHO European Center for PHC for creation of an integrated plan to strengthen diseases prevention and health promotion at the district. Project aims to strengthen people centeredness of PHC at Medeo district, through equal integration of all stakeholders into every step of decision-making using community based participatory research framework. Project includes development of teamwork in PHC teams' through multi-professional training, development of nurses' competencies for more autonomous work in community, community capacity building and empowerment. After gaining support from all stakeholders, we organized two interactive seminars with community members and PHC teams in order to assess district health needs and build an action plan. Ownership of community members in decision on priority health problem provided community buy-in, high level of engagement and enthusiasm in designing and implementation of the project activities. Voice from empowered community on priority health needs were accounted by local policymakers and led for creation of action plan on identified needs to be implemented in 2019 -2020. One of the main limits of the community engagement is gaining trust and sustainability of the group, we are mitigating it through involvement of academia as an "umbrella".

Key messages:

- Project will create a model for equal partnership in disease prevention and health promotion in Kazakhstan.
- Engaging all key stakeholders based on equal partnership creates sustainable outcomes for health and solidarity.

Critical thinking on strengthening the NGO contribution to improve solidarity in public health

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Issue/background:

Public health values transdisciplinary, multidisciplinary, and interdisciplinary perspectives. This background always advocates solidarity which usually finds its positive reflections in the society with the support of many institutional bodies including Non-governmental organization (NGO) movements. which move up solidarity. Globally, NGOs are represented by societies and associations. Turkey is one of the countries which NGO movement is frequent. Turkish NGOs in (public) health may vary on their vision(s) and mission(s). Such variety seems to be "good"; thus, complexity and duplications may occur when a strong systematic ground is not provided. In this paper, a systematic on the functionality of NGOs will be proposed to make the NGO movement more inclusive, accessible, transparent, and auditable in order to support solidarity using the experience of a local case.

Results:

The number of the societies is high in Turkey and they have a wide range of working area including health. Officially they are recorded in the Turkish Ministry of Internal Affairs (MoIA) and can be accessed via the website of the MoIA. There are about 300 000 societies which 116 000 of them are active. The majority of them are founded in big cities. Societies working on health focuses on different areas including professionalism, prevention, rehabilitation, etc. Such varieties may have the potential to create difficulty to follow up their work in a systematic manner.

Lessons:

As NGO/civil society movement is crucial for public health, the proposed steps may contribute to improve/support solidarity on any advocative work on health:

1. To maintain transparency, and auditability
2. To develop methods to prevent duplicative work
3. To develop accessible "common" platforms to share experiences
4. To improve adaptation capacity in the face of new requirements
5. To improve networking among NGOs
6. To improve the global perspective as well as the local one

Key messages:

- Solidarity in public health can be achieved with the help of systematic and powerful NGO/civil society movement.
- Global needs and changes influence civil society dynamics and NGOs should be open to be updated in the face of new requirements.

Improving Health Care Management in Primary Care for Homeless People: A Literature Review

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Background:

Homeless people have poorer health status than the general population. They need complex care management, because of associated medical troubles (somatic and psychiatric) and social difficulties. However, they face multiple difficulties in accessing primary health care and receive less preventive health care than the general population.

Methods:

We performed a literature review that included articles which described and evaluated primary care programs for homeless people. We searched into the MEDLINE, PsycINFO, COCHRANE library, and Cairn.info databases primary articles published between 1 January 2012 and 15 December 2016. We also performed a grey literature search, and we added relative articles as we read the references of the selected articles. We described the main characteristics of the primary care programs presented in the selected articles. Then we classified these characteristics in main categories, as a descriptive thematic analysis. Secondarily, we synthetized the main results about the evaluation of each intervention or organization.

Results:

Most of the programs presented a team-based approach, multidisciplinary and/or integrated care. They often proposed co-located services between somatic health services, mental health services and social support services. They also tried to answer to the specific needs of homeless people. Some characteristics of these programs were associated with significant positive outcomes: tailored primary care organizations, clinic orientation, multidisciplinary team-based models which included primary care physicians and clinic nurses, integration of social support, and engagement in the community's health.

Conclusions:

Primary health care programs that aimed at taking care of the homeless people should emphasize a multidisciplinary approach and should consider an integrated (mental, somatic and social) care model.

Key messages:

- To improve the health care management of homeless people it seems necessary to priorize multidisciplinary approach, integrated care, involve community health and answer their specific needs.
- It is necessary to evaluate more non-tailored primary care programs that collaborate with tailored structures.

Impact of macro-socioeconomic determinants on perinatal healthcare quality for very preterm infants

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The WHO identified the importance of macro-socioeconomic determinants and the political context as interlinked key factors affecting health equity. The 2008 economic crisis was associated with a significant low-birth-weight increase in Portugal, 2007-2014. The Economic Adjustment Programme (EAP), implemented to economize non-essential health care costs (2011-2014), substantially affected healthcare delivery and occupational environment of Healthcare Professionals (HCPs). This study aims to analyse the impact observed by HCPs of the economic crisis and EAP on equitable quality of perinatal healthcare for very preterm infants in Portugal.

A Qualitative study design with 21 HCPs in clinical settings equally distributed among Portuguese mainland were selected according to their response. Semi-structured interviews were conducted between October 2018-April 2019 until saturation point was achieved. A content analysis was performed using Nvivo2011 software.

Preliminary results on macro-socioeconomic determinants, classified and conceptualized into a three-stage-effect framework, disclosed an interrelation between factors impacting perinatal healthcare quality, according to HCPs. Primary-stage: increase in working hours and patient-ratio per HCPs, cuts in salaries and investment, increasing waiting time and HCPs demotivation. Secondary-stage: burnout, work-absence, time constraints, decreasing quality and consultation availability. Tertiary-stage: HCPs Brain-drain to private sector, double-shifts in public-private sector, increasing inadequacy of transmissivity within sector communication.

The economic crisis and EAP were perceived to have modified equitable perinatal healthcare quality for very preterm infants in Portugal. Increased private-public sector transparency to maximise quality assurance, equal HCP wage distribution to sustain capability, strengthening of social maternity protection strategies to enhance socioeconomic equity in perinatal healthcare, is recommended.

Key messages:

- The added value is the disclosure of an in-depth understanding on the interrelation of macro-socioeconomic determinants and healthcare permitting a distinct representation from quantitative methods.
- The non-linearity between policy response and expected outcomes chiefly complements its comprehension and demonstrates its relevance for further research on assessing effects of austerity measures.

Burnout and quality of life among masseurs with visual impairment - Polish cross-sectional study

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Background:

Although there are about 1.3 billion people affected by visual impairment (VI), they do not have equal access to social activities, i.e. they are very often unemployed. The authors hypothesized that being job active plays crucial role for their well-being. The aim of the study was to evaluate the level of burnout and quality of life (QoL) among Polish massage therapists with VI and to determine their relationship with sociodemographic and work-related variables.

Methods:

43 participants aged 28-63, blind or poor-sighted were surveyed with sociodemographic data questionnaire and Polish versions of the Maslach Burnout Inventory-General Survey to measure burnout and World Health Organization Quality of Life Questionnaire (WHOQOL-BREF) to evaluate quality of life.

Results:

Low level of burnout was indicated: 6.79 ± 4.45 in the exhaustion, 7.30 ± 3.43 in cynicism and 23.3 ± 5.44 in professional efficacy. Among domains of QoL the psychological one was the highest (73.6 ± 10.0). Professional efficacy correlated with the social QOL domain ($\rho = 0.306$; $t = 2.056$; $p = 0.046$). Among significant socio-demographic determinants of QOL marital status and working conditions were found. The most general explanation is that job activity gives feeling of self-realization, independence and enhance social functioning which has important meaning for QOL and can be a protective factor for burnout among workers with disability (according to researches among healthy professionals they are at high risk of burnout).

Conclusions:

Job activity is essential for psychosocial rehabilitation in VI. That is why we recommend education tailored to the needs and capabilities of persons with VI to prepare them for work as well as supporting employers in creating jobs opportunities for people with disabilities.

Key messages:

- Job opportunities for people with disabilities mean higher level of psychosocial functioning.
- Workers with disabilities present lower risk of burnout than professionals without impairment.

Youth engagement on health as a political issue

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Background:

In France, young people do not participate in the development of health policy. The latter is built on a representation of the young person who, because of his age, cannot have an opinion and proposals for his health and improve that of others. However, different young people are involved in health actions and propose improvements for the health system and prevention. The communication concerns the 'Re'Pairs Santé', young people who are committed with Unis-Cité, a national association, to developing health actions with other young people.

Methods:

20 'Re'Pairs santé' were interviewed in 3 French cities on their motivation for this engagement. Similarly, 80 young beneficiaries of their actions were met in focus groups to get their perception of Re'Pairs santé.

Results:

The engagement of Re'Pairs santé is part of a dimension of solidarity, and on their experience as young people to change the way adults and public policies are represented. For other young people, if there is an improvement in their health knowledge, half of them are involved in other local associations and/or are involved in changing health within their own structure.

Conclusions:

Health is not a minority issue both in the daily lives of young people and as a potential source of engagement. The Re'Pairs santé investment allows other young people to get involved in other structures. Thus, the social impact is not limited to the transmission of health information but promotes social cohesion and the development of social capital. The place and role of young people in the development of public health policies must be better valued and legitimized in order to better meet their expectations but also to destigmatize a population that has many resources.

Key messages:

- Fostering youth engagement on health.
- Youth should be considered as a resource for health policies.

Health promoting ideas and actions generated by community engagement in an underserved Swedish area

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Background:

For an intervention to contribute to decreased health gaps, people living in underserved areas must participate in the research-to-action process during the development of the intervention.

Methods for increased engagement and participation have been developed within the community-based participatory research (CBPR) paradigm. Group Level Assessment (GLA) is a qualitative, participatory methodology that is designed for a large group to generate and evaluate relevant needs and priorities within a lens of action for positive social change. Influence of researchers is tuned down in favour of partnership and impact from the community. Ideally, the process results in participant-driven data and relevant action plans. The aim was to apply GLA to generate reflections on the situation in the community, aligning towards action for change.

Methods:

We applied GLA together with people living in Gårdsten, an underserved Swedish suburb where obesity, caries and other illnesses are prevalent. Residents were recruited by posters and post cards at a community center and by snowball sampling. In total, 47 residents attended at least one of eight GLA sessions held over a five-month time period. The majority were women. Outcomes were reflections, suggestions and actions for change.

Results:

Themes were: resident pride of the area, the importance of communication and of places to meet, a feeling of being abandoned by society, and a desire for more collaboration between schools and parents. Immediate results were a language café and inquiries from the community about information regarding teeth, food and health. When the results were presented for stakeholders in a report and an exhibition, new collaborations were founded and old were refreshed.

Conclusions:

GLA helped residents identify what they thought valuable and relevant concerning health issues and supported them in taking actions to achieve change.

Key messages:

- Participatory processes that directly engage community residents can result in fruitful discussions and actions.
- Methodologies like GLA that support such processes may contribute to closing the health gap.

Public Health and Communication: closing the health gap depending on each other

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Issue:

At the center of the concept ''Health'' is self efficacy. Communication has potential to increase or decrease individuals/groups conception of themselves as valuable beings. In communities haunted by territorial stigmatization this aspect is crucial. Respectful communication, building on a true belief that competencies and resources dwell in every human being, evoke trust which is an important aspect of public health. Angered Hospital is situated in an area with high prevalence of illness. To allow for residents to exert influence over interventions and programs, the Public Health Unit of the hospital need access to skills not only in the area of public health but also in communication design.

Description of the problem:

The aim was to develop a trusting cooperation between the Public Health and Communication Units in a hospital, building on adherence to the Declaration on Human Rights and on expert knowledge. Focus is on increased health equity. Given barriers of spoken language and different perspectives, how can we set the scene for merging lay and expert knowledge on conditions for healthy habits and prerequisites for change, on individual and structural levels? How can residents be encouraged to seek help when needed? During two years, collaboration developed by intertwining theory and practice in continous discussions on planned and produced objects. Knowledge in communication design and in determinants of health equity, respectively, enriched both parties.

Changes:

A trusting relationship developed, resulting in the objects ''Heroes of Awngaryd''. The Heroes appear in many contexts; transfering knowledge, encouraging residents to use their competencies, inviting them to participate, and guiding to adequate care.

Lessons:

Sharing of the vision of health equity, active embracing of the Declaration of Human Rights and mutual respect for each others expert knowledge form the base for a successful and transparent cooperation between Public Health and Communication.

Key messages:

- In this setting, expert knowledge in both communication design and public health are needed to contribute to increased health equity.
- Common values, trust and specific skills optimize the work.

Understanding place-based public health to reduce inequalities in the context of austerity

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Background:

Ageing populations and increased prevalence of long-term conditions, combined with reduced public funding following the financial crisis mean health needs often outstrip provision. Furthermore, austerity policies across Europe have been associated with a steep rise in health inequalities.

Methods:

A comparative case study design, drawing on realist evaluation, examines the place-based strategies used by five UK Local Authorities (LAs) to maximise resources and reduce health inequalities. LAs were selected based on their implementation of innovative interventions and/or their experience of better or worse than expected trends in reducing health inequalities. Initial programme theories (IPTs) were developed through stakeholder consultation and literature searches, which will be tested and refined using case study data. Data collection methods are tailored to each case study context, but include: documentary analysis; system mapping exercises; and interviews with stakeholders and community members.

Preliminary Results:

Initial programme theories were developed detailing the place-based strategies that are most effective in maximising resources and improving health outcomes, depending on contextual conditions. These theories cover strategies such as income generation schemes to supplement taxation; the introduction of 'disruptive' voices into decision processes; outsourcing and widening skill-sets; reviewing and streamlining resources; and the development of tightly defined targets.

Conclusions:

There is currently a lack of guidance on the optimal allocation of limited resources and effective delivery of services and interventions in contexts of reduced spending. Employing a realist approach has enabled us to move beyond the particularities of local contexts and strategies to produce pragmatic and transferable solutions which can inform the funding decisions of local government.

Key messages:

- LAs have to innovate to balance growing needs with shrinking resources.
- Pragmatic lessons are drawn to inform decision making applicable beyond local contextual specificities.

Hospital ''Outside the walls'' against HIV and other Sexually Transmitted Infections (STIs) in Russia

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Background:

Though sponsored by UNAIDS support program, Russia struggles to curb its soaring HIV epidemic. French authorities invited Russian leaders of the HIV strategy, medical institutions or civil society in December 2018, to discover the practices of their French peers. A bridging process designed by the Public Health association AREMEDIA and developed in partnership with Fernand-Widal Hospital's testing center, to reach underserved populations, was shown. Merging associative and medical cultures, they created bonds with community associations to efficiently export free prevention, treatments and care for HIV and STIs, ''outside the walls'' of hospital facilities. In March 2019, they were mandated to detect dependable partners to transpose this method in the high-HIV burden Ural region.

Objectives:

Selecting local political leaders, field associations and public health structures, jointly designing a project to adapt AREMEDIA's model in Perm. Developing a training to implement locally outreach program in 2020.

Results:

- Contractual partnership with 4 entities in Perm and educational program.
- Presenting the interventional methodology at Perm University Conference on ''World AIDS day'', 1st December 2019.
- Theoretical and field trainings of Russian stakeholders to outreach sexual health interventions towards key populations, by associative and medical staff from AREMEDIA and the testing center in Paris. Practical support to implement outreach actions in urban areas of Perm from March to December 2020.
- Valorization of scientific results in Saint Petersburg International Conference, July 2020.

Conclusions:

Consensus found on a pilot training and research-action outreach program, approved by authorities. Advancing access to local key populations should foster switching the Russian strategy against HIV towards a comprehensive sexual health promotion paradigm, resulting among others in destigmatization.

Key messages:

- Support local stakeholders to promote equitable management of HIV and overall sexual health.
- Enhance socio-medical interface to reduce the hidden epidemic through reaching HIV key populations.

Giving blood: providing treatment, providing knowledge

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Background:

In France, 1,6 million donors contribute 3 million blood donations / year collected and tested by the French public transfusion service (Etablissement Français du Sang - EFS). At each donation, 2 ml plasma of are stored for 3 years for further testing if needed. In addition to providing life-saving blood products, blood donors may also provide knowledge through the sharing of their health data and bioresource collected at time of donation.

Objective:

To describe how blood donors can provide knowledge in addition to blood products.

Results:

Over the last 10 years, blood donors in France have enabled several studies performed by EFS in collaboration with research and reference laboratories as well as public health authorities. A linked assessment of Ab titers (+ clinical history) in donors having given blood before and after the 2009 H1N1 flu epidemic, as well as measles, rubella and hepatitis E virus seroprevalence studies (+ specific health questionnaires) have generated high value epidemiological data. Screening for arboviruses (such as Zika virus) and hepatitis A virus in donors during epidemics have increased knowledge of infectious spread and disease characteristics. Testing of plasma samples collected before variant Creutzfeldt-Jakob disease occurrence in two donors revealed the presence of circulating prion more than 1 year before diagnosis. A project to further take advantage of such a bio resource is underway. Upon occurrence and notification of a disease (or any pre-defined health event) in one of the 1,4 million repeat blood donors, all samples from prior donations would be gathered in a cohort of samples of all donors having notified an identical health event. Such cohorts would provide valuable samples to assess disease-specific biomarkers at pre-symptomatic phases.

Conclusions:

Providing the opportunity to donors to give knowledge in addition to blood can result in production of high value biomedical data. Giving blood, being a public health actor.

Key messages:

- Blood donors may provide knowledge and bioresources in addition to blood products.
- Blood donors in France have enabled several large-scale epidemiological studies.

Disparities in smoking habits in Hungarian Roma and general populations

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Background:

Smoking status, dependence and cessation efforts of the disadvantaged Hungarian Roma living in segregated settlements were compared to those of the general population.

Methods:

Data were collected through survey. Each study group consists of 500 randomly drawn subjects, and are representative of the adult (18-64) general and Roma population, living in two counties of North-East Hungary. Questions on smoking from the European Health Interview Survey were used with some modifications. Prevalence data were analysed according to age strata (18-29, 30-44 and 45-64 years) by chi2 test, and were compared to data from 2003 and 2014.

Results:

In Roma the proportion of never smokers is much less compared to the general ones (men:27.27% vs.75%, women:38.6% vs.70.75%, $p < 0.05$). Less Roma reported never smoking in all age compared to 2014, increasing trend can be found in the general population since 2003. Smoking prevalence is higher in Roma in all ages (72.73% vs.20 83%; 68.42% vs.28.42%; 59.02 vs. 32.26%, $p < 0.05$, respectively). Interestingly, the prevalence of Roma men smokers is decreasing by age, in the general population the trend is the opposite. Heavy smoker status is the highest in 30-44 age group of both populations. Increasing trend of heavy smoking can be detected in the Roma, but the opposite holds for general population compared to 2014. Half of the Roma smoke within 5 minutes after wakeup (50% vs. 36.92%, $p < 0.05$), smoke hand-rolled cigarettes (68.91%vs 30.77%, $p < 0.05$), higher proportion of them tried to quit (34.78% vs. 23.38%, $p < 0.05$) but smaller proportion of them obtained advise on how to quit (48.53% vs.59.09%, $p < 0.05$). Initiation starts earlier age among them (men: 15.1 vs.16.6, women: 16.2 vs.18.2, $p < 0.05$).

Conclusions:

Regular smoking (especially heavy) is much higher in the Roma and decreasing by age compared to the general in all age-groups. The 30-44 age group of Roma mean are exclusively heavy smokers but half of the Roma show effort to quit.

Key messages:

- Tailoring cessation programs for Roma men especially those belong to 30-44 age group is a priority to reduce tobacco-related adverse effects.
- Complex public health programmes that taking into account special socio-cultural environment and lower formal education level of the Roma are needed.

Crowdfunding for unmet medical needs: the case of CAR-T and Gofundme

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Background:

Crowdfunding (CF) is the practice of financing a project by raising money from a large number of people. Many patients use online CF platforms to fund medical needs, whether unmet by their healthcare service - therefore to be sought elsewhere -, or when unable to afford them. CAR-T (Chimeric antigen receptor T-cells) is an innovative therapy approved to treat several types of lymphoma and with potential to treat many other cancers. CAR-T is available in most countries through clinical trials only and its diffusion is limited by high costs. Gofundme is a CF platform 'leader in online medical fundraising'. The objective of this study is to shed some light on the phenomenon of CF for CAR-T therapy, describing the campaigns started on Gofundme.

Methods:

We extracted data from CAR-T campaigns started in Europe and publicly available on Gofundme until March 2019. Data related to each campaign has been analyzed and reported through descriptive analyses.

Results:

Since 2017, 26 CAR-T treatment campaigns have been started. Due to the privacy policy of the platform, we were able to retrieve data from only 12 of them; 3 campaigns were closed, thus not disclosing enough data to be included. Nine campaigns were studied: 4 from Italy, 4 from the UK, 1 from Spain. The United States were the main destination. The median campaign goal was 180k€. The number of campaign shares on social media and the percentage of goal raised seemed to be linked.

Conclusions:

CF is unquestionably a good expression of the Internet: it channels empathy towards important causes, providing tangible help. However, when applied to healthcare - especially to experimental treatments -, several questions arise. Patients affected by treatment resistant cancers may be prone trying new treatments to keep the hope alive, even when indication is missing or scientific evidence is lacking. Policymakers should monitor healthcare related CF campaigns, both for equity and safety reasons.

Key messages:
- Policymaker should monitor healthcare related CF campaigns, both for equity and safety reasons.
- Healthcare related crowdfunding campaigns could be interpreted as an indicator of unmet medical needs.

Estimated number of homeless people in Marseille in 2016

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Context:
Since 2011, a project in favour of access to rights, access to care and continuity of care for homeless people has been implemented in Marseille (ASSAb project: Access to Care for the Homeless). One of its main lines of action is to improve public knowledge and has led to a census of homeless adults in Marseille in 2016.

Methods:
The methodological approach chosen is based on a survey via homeless services, known as the 'Danish' method, which consists of counting the number of people who have used homeless services at least once over a given period (Brousse, 2005; Marpsat, 2009; FEANTSA, 2016). This approach avoids the difficulties of recording seasonal variations or any other one-off event and controls double counting.

Results:
In 2016, during the year, 14,063 people were at least once homeless in an emergency and accessed a dedicated reception or care facility. Compared to 2011, when 12,648 people were counted, this study reveals an overall increase of 11.2% in this population and a important increase in the number of women (+47%), elderly people (+24%) and minors (+85%).

Conclusions:
Association, institutions and professionals in the field report a greater feeling of increase in the population concerned than shown in this study. The saturation of the reception and support capacities of the structures and the evolution of the situation since 2016 partly explains this representation difference.

Key messages:
- This study informs policy makers and helps them in strategic orientations (Court of Accounts, 2017).
- This study provides input for the thinking and actions of the homeless sector.

DB Migration and health

Factors influencing use of natural environments among immigrant women in Norway

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Background:
Due to a high burden of health challenges among immigrants in Norway, and the documented health benefits of interaction with nature, Norwegian authorities have prioritized the promotion of outdoor recreation among immigrants. Success in this part of public health work presupposes knowledge about factors influencing immigrants' use of nature, which to date is scarce. The present study explores these conditions in a group of immigrant women in Norway.

Methods:
We performed individual interviews with 14 first generation immigrant women aged 27-70 years from Iran (2), Poland (2), Palestine, Afghanistan, Congo, Kenya, Thailand, Russia, Portugal, Latvia, Colombia and Bulgaria. Data were analyzed by qualitative content analysis.

Results:
Multiple and interrelated factors at the individual, relational, cultural/religious, and structural level influenced the interviewees' use of nature. Individual-level conditions included the interviewees' attitudes towards nature and their perceived control over making use of nature. Previous experiences with nature and role model influences shaped attitudes, and knowledge about outdoor life opportunities and appropriate clothing/equipment, and perceived security shaped perceived control. A major relational level barrier was the lack of access to companions for nature outings. A barrier at the cultural/religious level included the discomfort of wearing hijab/all-covering dresses in nature. Main structural level premises for use of nature included available time and economy and access to natural sites.

Conclusions:
This study highlights multiple conditions influencing immigrant women in Norway's use of nature. Public health actors should be aware of and take into account this knowledge.

Key messages:
- Factors influencing immigrant women in Norway's use of nature are to be found at different levels of influence.
- Strategies for increasing immigrants' use of nature should be based on existing knowledge about influencing factors.

Perceived risks and barriers to care for international migrants in transit through Mexico

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Background:
Mexico has implemented policies seeking to reduce barriers to care for migrants in transit; however, it is estimated that only 3% of migrants use public health services when needed. The main purpose of this study was to identify the barriers to access public health services faced by migrants in transit through Mexico.

Methods:
Under the human security perspective, in 2018, a qualitative study was carried out in Mexican communities with high migrant mobility. 34 semi-structured interviews were conducted with migrants in transit, and personnel from public health services and migrant shelters (NGOs). Values and meanings related to risks, health problems, barriers to care, experiences of health services utilization, and opinions on facilitating elements to diminish these barriers were identified.

Results:
Migrants in transit through Mexico face risks that affect all dimensions of human security. Perceived anti-migratory and discriminative attitudes during the journey were constantly mentioned in the interviews. Barriers to care were found in the four stages of health care access, classified according to the Tanahashi framework, with the majority related to accessibility and acceptability. The following facilitating elements were also identified: political willingness of local government, knowledge and talent management of health personnel, and strategies implemented for adapting local health care services to migrants.

Conclusions:

Social and political conditions in Mexico disrupt any effort to reduce social risks and barriers to care for migrants in transit. Non-governmental actors are key players for facilitating interactions between migrants and local governmental health care institutions. However, the general anti-migratory context negatively affects access to health care and influence the perspectives of migrants, NGOs, and health personnel.

Key messages:

- The predominant perceived barriers to care are in counterpoint to local governmental pro-migrant rights perspectives.
- NGOs are key actors to promote access to public health care services.

Migrants in Austria and their understanding of mental health issues

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Psychosocial needs are common among migrants but their use of mental health services is not. Little is known about the understanding of mental health issues by migrants and their perception of mental health services. The study aims to provide a basis for further developments of the mental health system to contribute to health equity in the long term.

Qualitative research: literature review, semi-structured interviews and focus groups. 54 migrants from Afghanistan, Somalia, arabic-speaking countries and Turkey and 16 experts were involved. Access was gained through cooperating with an institution offering various health services in different languages and well-known by migrant communities. Migrants from Turkey with long residence in Austria and linked to psychosocial services were chosen as reference group. There are many similarities among socio-economically disadvantaged people in terms of their understanding of mental health and their willingness to seek and accept support. However, differences can also be observed which are related to country of origin or gender, but also to acculturation status, current life situation or previous experiences within the home or the receiving country. The Turkish reference group shows, that mental health issues are given higher priority in the course of time. To quicken this process, targeted measures for the promotion of health literacy are decisive, but also integration possibilities and the social climate. With a wide range of access and psychosocial support options, attitudes like openness, impartiality and flexibility among health professionals, it is possible to reach migrants with psychosocial needs.

A stronger exchange on how people with a migration background and psychosocial needs are perceived and reached is needed. But also activities to increase the diversity of support services and to carry information about mental health issues as well as the existing services into the migrant communities

Key messages:

- Specific activities can improve the knowledge about mental health issues within migrant communities.
- A wide range of access and psychosocial support services is needed to address the diversity.

Advocating migrant and minority health in Bulgaria through an innovative education subject

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Introduction:

Migrants and ethnic minorities often face serious inequities concerning their access to good quality health services. The Statement by the European Public Health Association on migration, ethnicity and health addresses the need of supporting public health policy makers by providing education courses.

The objectives of the teaching course ‘‘Migrant and minority health’’, established in Medical University-Pleven in Bulgaria as optional additional subject, is to extend the specific knowledge of students (bachelors and masters of public health) and to develop competencies and skills of future public health practitioners and policy makers.

Results:

The unique for Bulgaria course consists of 15 academic hours of the curriculum and ends with an electronically based test. Teaching methods include lectures, seminars and individual practical assignment and stresses on practice rather than theory. The training advocates migrant and minority health by presenting: the most important migrant's social and health problems; impact of migrants' health status on public health; the organization of healthcare in the recipient countries of migrants. The lecture course provides information for the main challenges facing healthcare professionals and the health system regarding the health of the migrants and main minorities groups, in particular the Roma as a predominantly ethnic minority in Bulgaria and Europe. The result of exam until now is good in 42.8% of students, very good in 14.2% and excellent in 42.8%. The curse enable public health professionals to acquire knowledge regarding to the international situation, critical assessment skills and the ability to implement appropriate strategies to address specific health problems.

Conclusions:

The training meets the needs of in-depth knowledge of public health specialists in relation to the medical and social problems of migrants and minorities in Bulgaria. The positive experience gives ground to include it as part of basic curricula.

Key messages:

- The subject ‘‘Migrant and minority health’’ enhances student's competencies as public health practitioners. Knowledge and skills are relevant to the EUPHA Statement on migration, ethnicity and health.
- By the subject ‘‘Migrant and minority health’’ public health practitioners may work to establish friendly health system with good quality of health services for migrants and Roma population in Bulgaria.

Health, wellbeing and access to care of undocumented migrants in Geneva, Switzerland

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Background:

Switzerland hosts 50'000 to 100'000 undocumented migrants but hardly any evidence exist about their health and wellbeing. A pilot regularization policy took place in Geneva (2017-2018).

Methods:

Parchemins is a mixed-methods prospective study assessing the impact of legal status regularization on undocumented migrants' health and wellbeing. The quantitative data collection uses yearly face-to-face health questionnaire. Wellbeing is measured by self-reported satisfaction with life on a 10-point Likert scale. We present the results of the first wave of data collection conducted before regularization.

Results:

Participants were mainly women (71.9%) from Latin America (63.2%), aged 44.2 (SD 10.4) years, with secondary or higher education (77.3%), living in Geneva with a partner (47.6%) and minor children (22.3%) for an average of 11.8 (SD 5.4) years. While 82.2% reported good to excellent health, 54% presented overweight or obesity and 21% suffered 3 or more chronic conditions. Self-reported prevalence of hypertension, hypercholesterolemia and diabetes were 17.6%, 7.6% and 4.9%, respectively. Screening for depression and anxiety using PHQ-9 and GAD-7 scales was positive in 45.2% and 35.9% of participants. Only 29.9% had a health insurance. In the previous year, 74.8% had at least one medical consultation and 30.4% consulted in emergency but 27% had renounced to seek care for economic reasons. Overall, 97.3% were exposed to health hazards at the workplace and 5.9% suffered an accident leading to work interruption in the last 6 months. Overall, life satisfaction level amounted to 7.4 (SD 2.2) out of 10.

Conclusions:

The baseline results show a contrast between good self-reported health and fair wellbeing with frequent comorbid health conditions notably of mental origin, exposure to occupational hazards and economic limitations in the ability to respond to one's health care needs. Next study waves will shade light on the public health and clinical impact of regularization.

Key messages:

- Legal status may act as a key determinant of health therefore regularization is likely to produce significant health effects.
- Undocumented migrants good wellbeing and self-reported health contrasts with high morbidity notably of mental origin.

Adequate utilisation of emergency services in Germany: a differential by migration background?

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Background:

The role of emergency services (ES) is to provide a round-the-clock acute care. In recent years, inadequate use of emergency services has been internationally thematised because of overcrowding and the cost associated. There is only limited evidence regarding the pattern of utilisation of ES by populations with a migration background.

Methods:

Consecutive patients visiting three ES in Berlin from July 2017 to July 2018, and who fulfilled inclusion criteria such as being conscious, were recruited into the study. A questionnaire covered medical conditions, reasons to visit the ES, and socio-economic factors. A criterion for the adequacy of utilisation was developed using a sub-sample of patients with information provided by physicians. Differences between migrants (1st generation), their offspring (2nd generation), and non-migrants were evaluated using logistic regression.

Results:

2 327 patients were included, 901 had a migration background. The utilisation was adequate if the patient was admitted to hospital and/or if all three following criterion were fulfilled: reported to have been advised by a physician to visit the ES; reported strong pain; and reported a high perceived urgency (both ≥ 7 on a scale from 0 to 10). Adjusting for gender, age, condition and number of recent visits to ES, 1st generation migrants had a significantly higher chance than non-migrants to have an inadequate utilisation of services (OR 1.30; 95% CI [1.01; 1.68]). For 2nd generation persons, this was not statistically significant.

Conclusions:

First generation migrants have a higher chance of inadequate ES use compared to non-migrants. A similar study 20 years ago had similar findings. This implies that existing information leaflets on ES addressing specific population groups are not sufficient to improve adequacy of use. Structural changes in the healthcare system as well as improved methods of communication respecting the needs of diverse subgroups of patients need to be considered.

Key messages:

- Existing information leaflets on emergency services addressing specific population groups are not sufficient to improve adequacy of use.
- Structural changes in the healthcare system as well as improved methods of communication respecting the needs of diverse subgroups of patients need to be considered.

Support for unaccompanied children and youth - Results from a systematic literature review

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Background:

A systematic literature review about unaccompanied minors was done with the following focus:

- scientifically documented effects of support
- experiences of unaccompanied children and youth about positive and negative factors

Methods:

2 210 abstracts were examined. Assessment of relevance and quality and the analysis were done according to SBU standard.

Results:

No controlled study on effects were fulfilling the inclusion criteria. However, 29 articles with qualitative design were included. Seven overall themes were identified:

- Security and control: a basic requirement
- The new country: both opportunities and difficulties
- Managing difficulties: a balance between different strategies
- Everyday environments: supportive relationships as well as influence in housing and access to schools and activities are important
- Relationships: support and guidance from adults is important, contact with peers important, but also difficult
- Social services and health and medical care: varying views on and experiences of support and needs
- Identity and affiliation: getting together the past, the present and the future.

The seven themes could be grouped in three overarching levels:

1. Basic living conditions and survival
2. Difficulties and opportunities in everyday life
3. Weighting of bringing together existence on an overall plan

Conclusions:

To our knowledge, this is the largest literature review about support for unaccompanied children and youth. In the absence of controlled effect studies, it is particularly important to pay attention to unaccompanied children and youths own experiences when providing guidance for how societýs support for this heterogeneous group can be designed, in accordance with their rights in the Convention on the Rights of the Child. The results of the review are compared to common policies in handling unaccompanied children and youth.

Key messages:

- Unaccompanied children have commonly experienced trauma and loss. A lack of basic security has a pronounced effect on the ability to cope with daily issues and difficulties as well as with the future.
- Unaccompanied children and youth have a great need for adult support and guidance.

Parent emigration and physical health of children left behind: systematic review of the literature

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Background:

Children left behind (CLB) are those, who have been left behind at their original residence while one or both parents migrate to other places for work. The aim of this study was to systematically review studies where the physical health consequences for CLB were analysed.

Methods:

We searched the Web of Science, PubMed, Academic Search Complete, PsycINFO and Cochrane databases. We included studies reporting physical health outcomes of children affected by parent migration.

Results:

We selected 35 studies from a total of 2191. The results reveal that, overall, the absence of one or both parents is related to poorer child health - the nutrition of CLB is not healthy or balanced and is insufficient, leading to higher rates of anaemia and poor growth indicators of affected children. Boys left by parents are smaller than boys who were never left behind. CLB face lower underweight or stunted growth risks due to the additional income from remittances which ensures sufficient food for the household, this can also lead, however, to overweight and obesity. Unhealthy lifestyle behaviours such as smoking, alcohol, food preferences, lower physical activity and higher risk of injuries were more prevalent among CLB. CLB were more likely not to have completed the recommended vaccination programme than those living with their parents. Opinions vary on how emigration of parents affects children's well-being and quality of life. CLB had higher probabilities of higher well-being than children living in non-migrant households. However, health-related quality of life (HRQoL) of CLB scored significantly lower than HRQoL of non-left-behind children.

Conclusions:

The migration of parents has negative impacts on the child's physical health, however it can also have positive impacts on children's well-being when basic needs for sufficient nutrition are not satisfied in the home countries. Public health interventions should be taken to ensure the health of the CLB population.

Key messages:

- This is the first systematic review on the physical health of CLB.
- The well-being of CLB is poorer and they are at risk of health problems, such as insufficient and/or unbalanced diet, unhealthy behaviours and incomplete vaccination status.

Non-communicable diseases among refugees claimants in Greek refugee camps—are their care needs met?

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Background:

Little is known about the prevalence of non-communicable diseases (NCDs) among newly arrived refugees in Europe and whether their medical needs are met. The objective of this study was to investigate patterns of NCDs as refugee claimants migrate, whether refugee claimants experience unmet health-care needs before, during and after flight when living in Greek refugee camps and to elucidate sociodemographic determinants for unmet medical care needs in the Greek refugee camps.

Methods:

Survey data collected in 2016 among 267 newly arrived adult asylum-seekers staying at six refugee camps in Greece was used. The survey was available in English, Arabic and Farsi. We inspected frequency distributions of NCDs and unmet medical care needs, and using multiple logistic regression analysis, we estimated determinants for unmet medical needs in Greece.

Results:

The majority had a good or fair self-reported health; yet, 17.1% suffered from 1 NCD, while 42.1% suffered from 2 or more NCDs. The most prevalent reported NCDs in Greece were: back or neck pain (26.6%) and severe headache (24.7%). The prevalence of most NCDs in the migration phases followed a U- or J-shaped pattern: decreased during migration and increased after migration to Greece. Unmet medical care needs were reported by 41.3% with one NCD after arrival in Greece. Compared with young adults, adults aged 51+ years were in increased risk of reporting unmet medical needs in Greece [odds ratio = 7.59; p = 0.015].

Conclusions:

The high number of persons who report NCDs underscore the need for availability of diagnostic tools and agents to ensure that the refugee claimants receive the right healthcare assistance. Tools and guidelines to provide continuity of NCD care when people migrate are likewise important. Many European countries that receive this group of refugees should take the disease patterns, including multi-morbidity, into consideration when planning for health reception and the organization of healthcare.

Key messages:

- The prevalence of NCDs among refugee claimants decreased during migration and increased after migration to Greece.
- Unmet medical care needs were reported by 41.3% with one NCD after arrival in Greece.

A partnership between a local public health unit and schools to end female genital mutilation

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Female genital mutilation (FGM) is a violation of human rights and has immediate and long-term health impacts. Our public health unit is in Amadora, one of the regions in Portugal with the highest prevalence of FGM in immigrant communities.

Recognising the importance of education and of early-life interventions in changing beliefs, we partnered with local schools, a non-governmental organisation and child protection services. We developed a book with information and resources for teachers and created a training package for school professionals. This comprehensive school intervention focused on two aspects. First, it focused on prevention, as we trained school professionals, provided risk score indicators and defined actions to take. Second, in health promotion as we compiled ideas and resources on how to approach this subject in classes while debating sexual health, gender inequality, human rights and cultural heritages.

From November 2018 to February 2019 we collected inputs by all partners and tested the instruments in a pilot school with a mixed-methods approach through questionnaires and a focus group.

The book was distributed to all schools in Amadora, to other public health units and institutions. The preliminary evaluation was done by a questionnaire where 72.7% of the respondents found it useful and addressing the key topics and 54.5% found it detailed enough. These results are preliminary, with further evaluation planned for September 2019 and June 2020 to understand both the experience and needs of teachers after implementing the project.

This project has led to schools showing interest in developing closer cooperation in this and in other health topics.

To our knowledge, this is the first school intervention by a public health team focusing on FGM in Portugal. Other countries have materials on FGM for teachers, however we believe our intervention was the first tailored to a local community and in close collaboration with local schools and institutions.

Key messages:

- There is potential for a closer collaboration with schools to try to end female genital mutilation and to address other health topics.
- Local public health units should establish and mobilise local networks of institutions and community partners to tackle complex public health problems.

Culturally sensitive diabetes education supporting ethnic minorities with type 2 diabetes

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Background:

Ethnic minorities of non-Western origin are at higher risk of type 2 diabetes and diabetes complications, compared to the general population. Diabetes education programmes are essential to support people with diabetes to initiate and sustain behaviours needed to manage their condition throughout their lives. However, shaping diabetes education that provide culturally sensitive education that is acceptable to and supports diabetes self-management among members of ethnic minorities is needed.

Objectives:

In this study, we develop and evaluate a culturally sensitive diabetes education programme in a community health setting, focusing on Arabic, Urdu or Turkish languages (n = 100). The programme aims to support ethnic minorities with type 2 diabetes in making health-promoting decisions about their care. Also, it will produce knowledge about methods and tools to improve content and format, and about the skills of those delivering the education. Using design-based research, the development comprised three phases: needs assessment, co-creation and testing. The target groups were actively involved in all phases.

Results:

The needs assessment was based on fieldwork, workshops and interviews with the target groups and educators. Data showed that self-blame and learned helplessness undermined health-promoting decisions in the target groups. Also, a lack of clear roles between educators and peer educators, and a limited focus on goal setting in the educational setting was observed. The needs assessment informed the development of a 6 week group-based programme, supported by 11 dialogue tools. Preliminary findings show a high level of programme acceptability and participation as well as engagement in diabetes and care in the target groups.

Conclusions:

By actively involving the target groups, health care professionals and as well as health services directly engaged with the target group, the outcomes of the programme are likely to be relevant to individuals and institutions.

Key messages:

- This study gives voice to ethnic minorities with type 2 diabetes through the co-creation of a diabetes education programme aiming to support health-promoting decisions.
- Innovative and involving methods are highly relevant to develop acceptable and effective diabetes education programmes targeting ethnic minority groups.

Health promotion for unaccompanied minor asylum seekers – a qualitative evaluation

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Background:

We evaluated a health promotion program (HPP) for unaccompanied minor asylum seekers (UMA) in the canton of Vaud, Switzerland. UMA are particularly vulnerable to a range of health issues, due to their age and migration experiences. Effective health promotion programs are key to empower them to overcome these challenges and to improve their health.

Methods:

We adopted a qualitative design with ethnographic and participatory elements to identify strengths, opportunities for improvement and appropriateness as perceived by UMA, educators and nurses responsible for UMA health care and the HPP. Data collection included observation of HPP courses, focus group discussions with UMA and interviews with educators. Analysis was based on a grounded theory in ethnography approach.

Results:

Finding include three main themes: 1) UMA's perceived low power and control, due to predominant rules and regulations and uncertainty about the future; 2) A need for health promotion in this population, due to UMA's risk behaviours and the educators' perceived discomfort with health-related issues and health promotion; 3) Practical feedback regarding topics, teaching methods and HPP organisation. Main recommendations include using effective adolescent health education methods to improve the appropriateness to age and context, enhancing participation of educators in health promotion and improving practical aspects of the HPP.

Conclusions:

We evaluated and documented health promotion practice in the hard to reach population of UMA. Feasible changes in teaching methods and multidisciplinary collaboration may improve the HPP. However, UMA's social environment needs to be taken into consideration to provide effective health promotion programs.

Key messages:

- Unaccompanied minor asylum seeker and educators perceive the health promotion program as useful and important.
- To address the health promotion needs of UMA, any program must be adaptive to the contextual complexity of UMA lives.

Access to health care among people with foreign background and the general population in Finland

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Background:

Prior studies suggest that people with foreign background (PFB) often face problems in access to health care, although access to care may vary between the different PFB groups. This study explores 1) the potential differences in perceived access to care between different PFB groups and the general population, and 2) if marital status, education, employment, self-perceived health, long-term illness, length of stay, age moved to Finland or language skills are associated with access to care among PFB.

Methods:

The data were gathered from the cross-sectional survey on well-being among the PFB (FinMONIK), conducted in Finland 2018. Its random sample consisted of 12 877 persons, aged 18-64 years and the response rate was 53%. Three items were used to assess perceived access to care: I was able to contact the place of care smoothly, I was able to make an appointment without undue delay and I was examined without undue delay (e.g. laboratory tests, X-ray, ultrasound). Logistic regression was used to test which factors were associated with accesses to care, adjusted for age, sex and region.

Results:

After controlling for age, sex and region, the results showed significant differences in access to care among different migrant groups and the general population ($p < 0.001$). Of those of Estonian background 37% felt that access to care was smooth while only 17% of those coming from Middle-East, and 26% of the general population. Employed persons, persons who had good self-perceived health, and people with no long-term illness, and those who had lived in Finland less than five years, had better access to health care. Marital status, education, language skills and age moved to Finland, were not associated with access to care.

Conclusions:

Large inequities in access to care were identified among people with foreign background. Access to services seems to be better for employed persons and those who have good self-perceived health.

Key messages:

- Special attention should be given to improve access to care among non-employed migrants.
- Migrants should not be considered as a uniform group when planning services.

Services for refugees subject to sexual and gender-based violence in Turkey and Sweden

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Background:

Sexual and gender-based violence affects an unknown proportion of Syrians seeking refuge from the ongoing conflict. Exile implies a vulnerability to gendered harms with consequent health effects over the short- and long-term. Services for refugees tend to presume physical gendered harms accruing to women prior to exile, with little attention paid to the effects on refugees' settlement in the new society.

Methods:

Interviews with health and social care providers of services to refugees in Sweden (n = 20) and Turkey (n = 20), including international organisations, non-government agencies, municipal and other statutory agents.

Results:

Definitions of sexual and gender-based violence that inform service delivery vary greatly between health and social care service providers, with these definitions proving critical for how services are configured and provided. Service providers may consider longer-term health problems arising from refugees' experience of sexual and gender-based violence, but refugees' prospects of integration are rarely explicitly addressed. Refugees' own views on their health and social care needs do not inform the design or development of service provision.

Conclusions:

The experience of sexual and gender-based violence by refugees from Syria is widely recognised among health and social care providers in Turkey and Sweden. However, the experience of such violence is rarely addressed as a public health problem, that is, as a social determinant of ill health and, furthermore, an impediment to successful integration. The long-term, ill effects of sexual and gender-based violence, as seen over the lifecourse, are over-looked when considering refugees.

Key messages:

- Services for refugees who have been subject to sexual and gender-based violence vary in terms of how that violence is understood and which of its outcomes are addressed.
- Sexual and gender-based violence when experienced by refugees is rarely seen as a public health problem.

Policies for tackling health inequities in migrants in an irregular situation: learning from Italy

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Issue:

With increasing of numbers of people moving in Europe and around the world, the health of migrants has become a key global public-health issue. Migrants in an irregular situation (MIS) represent an important part of the migration phenomenon, whether they have become irregular by entering a country without authorisation or by overstaying a visa, including whose applied unsuccessfully for asylum.

Description of the problem:

Overstaying of visas is not unusual in EU countries and during 2015 and 2016 in particular, many countries experienced a large number of unauthorised entrants. Health policies for MIS are increasingly a matter of concern. Using the 2015 Migrant Integration Policy Index Health strand (MIPEX HS) it is possible to conduct an analysis of health policies, focusing on access to health services by MIS.

Results:

Among the 34 European countries covered by the MIPEX HS, Italy's overall score of 65 is exceeded only by Switzerland (70) and Norway (67). Averaging the indicators of access for MIS, Italy obtains the highest score (83), followed by Denmark, France, the Netherlands, Romania, Spain, Sweden and Switzerland with 67. Its score for legal entitlements to health care is 75 (the same as Sweden), while reporting of MIS to the immigration authorities is prohibited and there are no sanctions against helping them. However, legislation introduced by the new government in 2018 has restricted some of their rights.

Lessons:

Current migration to Europe requires dealing with short-term health needs as well as strengthening public health and health systems in the long term. This presentation will discuss the lessons that can be learned from the comparative analysis of health policies for MIS using the MIPEX HS.

Key messages:

- Affordable health care is a human right, which should not be denied to any migrant.
- Policy analysis plays a key role in identifying interventions for promoting health equity.

Mental health treatment gap in adults of Russian, Somali, and Kurdish origin in Finland

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Background:
Migration affects migrating persons' health in many levels. Populations of migrant origin, and in particular refugees, are known to have an increased risk of mental ill health. Previous research from Finland has shown that the prevalence of mental health symptoms is significantly higher among Russian origin women and Kurdish origin men and women than in the general population. Building on prior research, we explore the prevalence of perceived need for mental healthcare among Russian, Somali, and Kurdish origin populations and compare this to the general population in Finland. Additionally, we present prevalence of mental health treatment gap in these groups.

Methods:
We used data from the Finnish Migrant Health and Wellbeing Study (n = 1404) and the Health 2011 Survey (n = 1459). Prevalence was calculated using predicted margins (95% confidence level). P-value of less than 0.05 was considered significant. Mental health treatment gap was examined by constructing a combined variable of perceived need for mental health services and prevalence of service use.

Results:
The perceived need for mental health services was higher in Kurdish origin persons (16%) and lower in Somali origin persons (<1%) than in the general population (8%). Both Kurdish origin men (11%) and women (20%) expressed more need for mental health services than men (4%) and women (11%) in the general population. The mental health treatment gap was highest in Russian origin women (10%) and Kurdish origin women (10%) and men (8%). For the general population, the treatment gap was only 1% (men 2 %, women <1%).

Conclusions:
Untreated mental health problems are unjust, problematic and can be a source of great human suffering. Evidence from Finland shows that especially persons of Kurdish origin experience a mental health treatment gap. To expand coverage and reduce inequalities in health services, national development projects (e.g. PALOMA) have been launched to improve mental healthcare.

Key messages:

- Perceived need for mental health services is more common among certain foreign-born populations than the general population in Finland; this is in line with prior research on mental health symptoms.
- Untreated mental health problems are unjust, problematic and can be a source of great human suffering; evidence of mental health treatment gap should lead to improved access to mental health services.

Increase of tuberculosis incidence in Ile-de-France region and the role of recent migration

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Background:
In metropolitan France and in the Ile-de-France region, the incidence of tuberculosis has globally decreased since the year 2000 and has stabilized from 2011 to 2015. This study analysed the evolution of tuberculosis in the Ile-de-France region between 2015 and 2017.

Methods:
We analysed tuberculosis cases reported in Ile-de-France from 2015 to 2017; 2015 was considered as the baseline year. Incidence rates of reported tuberculosis cases were estimated using French census data for the corresponding year for the denominator. Age-standardized rates were estimated for each of the 8 departments of the region based on the Ile-de-France region population. Foreigners' population was based on the 2015 French census data. Differences in incidence and proportions were tested with the CHI2 statistic (STATA® v14.0).

Results:
The incidence of tuberculosis increased in the Ile-de-France region from 14.6 to 15.8/100 000 pop. between 2015 and 2017 (+8.2%, $p < 0.01$). In this region, all department's incidence were above 10/100 000 pop. in 2017. Sub-regional disparities were observed, with an important increase of the incidence in Paris, from 13,5 to 16.8/100 000 pop. between 2015 and 2017 ($p < 0,01$). The incidence rates among foreigners increased from 44.6 to 51.7/100 000 pop. ($p < 0.01$) and the proportion of tuberculosis cases among foreigners who arrived in France less than 2 years ago increased from 23% to 32% ($p < 0.01$), between 2015 and 2017. The incidence rates of tuberculosis cases increased particularly in men, foreigners, and recent migrants.

Conclusions:
The incidence of tuberculosis increased in the Ile-de-France region in 2016 and 2017, particularly in newly arrived migrants. This situation requires actions to better detect and manage tuberculosis in this specific population.

Key messages:

- The incidence of tuberculosis increased in the Ile-de-France region.
- The incidence of tuberculosis increased in vulnerable population in relation with recent migration.

Migrants' social determinants of health: living conditions, violence exposure, access to healthcare

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Background:
WHO and some other authors consider migration as a social determinant of health. MdM identifies it being composed of different factors such as living conditions, exposure to violence and access to healthcare.

Methods:
We analysed a comparative quali-quantitative survey in 4 locations, in Niger, Morocco and Tunisia, based on questionnaires and focus groups, with basic statistical tests and a complementary qualitative analysis.

Results:
461 migrants were interviewed, 59% women, median age 28 year, 98.5% sub-Saharan African origin, 63% with no legal documents.

46% travelled for more than 6 months, 47% stayed in the country of interview more than 12 months, even if most of them wanted to go on. 83.8% faced violence during their life, 61% during migration.

58% of violence was psychological in nature, confiscation of money and/or documents, or violence by police or army. The types of violence's vary according to gender and localization. Only 39% did not face barriers to access to healthcare. The 3 main barriers are financial, lack of understanding of the health system and discrimination. 50% of migrants considered their health status as medium, bad or very bad, what is insufficient for such a young population.

Conclusions:
Some events are always part of migration: long duration, violence, barriers to access healthcare, with an overall negative impact on health. Recommendations: Authorities should address the structural factors of violence against migrants. The health needs of migrants should be taken into account in policies at all levels. Health services should always consider migrants' needs: determinants of health, mental health,

consequences of violence and difficult access to healthcare. Research needs: What are the specific social determinants of health in migration?

Key messages:

- The health status of migrants seems to get worse along the road.
- Some migration events should be considered as social determinants of health and addressed by health services.

Asylum seekers' mental health in the Finnish Asylum Seekers Health and Wellbeing Survey (TERTTU)

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Background:

Asylum seekers have major health and well-being burdens, including mental health. However, there is a lack of population-based survey data on the health status and service needs of asylum seekers in Europe. The TERTTU-project was launched to fill these information gaps and to develop the current health examination protocol for assessing the health, well-being and need for health care services, including mental health, of newly arrived asylum seekers.

Methods:

As part of the TERTTU-project, systematic, nationally representative data was collected in 2018 by conducting a health examination and a face-to-face interview survey in reception centers in Finland (n = 1087). The sample was drawn from the Finnish Immigration Services electronic asylum database. Mental health was assessed with the HSCL and PROTECT questionnaires (SDQ among the children), along with questions of potentially traumatic experiences.

Results:

39% (95% CI 35,6-42,6) of the adults had current severe depressive and anxiety symptoms, 50% (95% CI 46,9-53,9) had an increased risk for PTSD, and 83% (95% CI 80,0-85,3) had experienced at least one potentially traumatic event before arriving to Finland. The most common psychosocial symptoms among 2-6 year-olds were behavioral symptoms (49%) and difficulties in peer relationships (37%). Difficulties in peer relationships were also common among 7-17 year-olds (49%), followed by challenges in the emotional domain (42%).

Conclusions:

Potentially traumatic experiences and mental health problems are common among asylum seekers in Finland. Based on the survey-data, a national health examination protocol will be developed in 2019 to improve assessment and identification and to enable systematic health monitoring and evidence-based development of services for asylum seekers. A common health examination protocol will also unify practices across reception centers all over the country.

Key messages:

- Potentially traumatic experiences and mental health problems are common among asylum seekers in Finland.
- A national health examination protocol allows for the early identification of vulnerable groups and individuals.

Barriers to health access for women during forced migration: An exploratory study

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Background:

Mass migration is a global crisis that has a number of significant public health implications for Europe. With more than a billion migrants worldwide, Europe receives a significant proportion of those, many of whom are forced migrants, possessing particular health and social vulnerabilities. Many forced migrants transit through, or settle within Europe. Despite this, there is a dearth of literature examining the experiences and perspectives of forced migrants or the barriers they may face in accessing health services. Understanding these barriers is integral to developing an effective international response.

Methods:

Using purposive sampling, 8 female key informants from displacement backgrounds were recruited for in-depth interviews from Queensland, Australia. The interview questions focused on past experiences of accessing healthcare during displacement and were formulated around the 5 dimensions of health access described by Levesque, Harris and Russell (2013). Data was analysed using qualitative content analysis.

Results:

Under the five dimensions of health access (approachability, acceptability, availability, affordability and appropriateness) twelve sub-themes were identified that were specific to the displacement context. Common sub-themes included mistrust of health services, irregularity in access, focus on acute health conditions, limited healthcare capacity, self-treatment; with pharmacies often the first point of contact, and the neglected health needs of vulnerable populations, such as women.

Conclusions:

The current global mass population flows, display a need to consider the long-term health effects of displacement and how these experiences shape migrants' future health-seeking behaviours. A significant number of forced migrants transit or settle within Europe and therefore there is a demonstrable need to understand the perspectives and experiences of those individuals, if equitable health access is to be attained.

Key messages:

- This is the first study to the authors' knowledge that applies a structured framework to the displacement experience, providing novel insights of an under-researched population.
- It is essential to understand the perceived barriers to health access of forced migrants in order to reduce morbidity, mortality, inequity and associated healthcare costs.

Self-reported discrimination in health surveys: results from a scoping review

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Background:

Surveying perceived discrimination in the context of health monitoring can help to clarify the connection between unequal treatment and health. We aimed to review, identify and extract data on definitions and measures of discrimination.

Methods:

A scoping review of both peer reviewed and grey literature was conducted. Survey instruments used in representative surveys in Germany were compared and discussed regarding their strengths and limitations. Ethical and methodical guidelines and policy reports by WHO, ECDC, EUPHA, migration research institutions and local NGOs were considered.

Results:

Research from North America, South Africa and, to a lesser extent, European countries shows a clear link between discrimination and health. Various scales, individual items and instruments operationalize discrimination as worse treatment in everyday life or disadvantage in the structural field (authorities, housing market, working life). Possible reasons and frequencies of experiences are surveyed. Additional instruments are used to evaluate moderators such as vigilance or coping. Besides validity and reliability, ethical aspects such as voluntary self-disclosure, avoidance of external ascriptions and assessment of multiple dimensions of discrimination should be considered.

Conclusions:

We propose a three-stage instrument for surveying perceived discrimination in German health surveys. First, the frequency of interpersonal experiences is surveyed by the everyday discrimination scale validated for different settings. Second, possible reasons for the reported experiences are asked, based on the categories of the German General Equal Treatment Act. Lastly, questions on discrimination in health care and by public authorities will address specific public health areas.

Key messages:

- Only few studies are available on discrimination and health in Europe, more is needed to effectively address health disparities.
- We propose to consider specific ethical and methodical aspects when surveying perceived discrimination as a health determinant.

Self-reported health conditions among refugees and asylum-seekers (AS) in Italian hosting centres

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In recent years, Italy has been facing an increase in migration flows. Migrants are vulnerable: understanding underlying conditions is essential to provide suitable assistance. We investigated health conditions of AS arrived in 2014-2016 and living in hosting centres in northeast Italy. AS filled in a multi-language questionnaire. Demographic characteristics, self-reported health status and travel conditions were recorded. Logistic regression (adjusting for age, sea/land arrival, marital status, education level), $\chi 2$ and Fisher's test were used (significance at .05). 216 AS were included, of which 98% males and 91% aged 15-34; 72% arrived by sea, of which 96% from West Africa (WA), while 94% of land arrivals were from the Indian Subcontinent (IS). 62% experienced health problems after arrival. This condition was significantly associated with sea arrival (aOR 2.9), married status (aOR 3.1) and higher education levels. Most problems involved GI tract (13%), teeth (17%) and skin (25%), being AS from WA (31%) more affected than IS (10%). STDs and alcohol were considered as health threats by more than 30% of AS, while smoking, diet and drugs were ignored; 27% and 23% declared to smoke and consume alcohol, respectively, with no substantial change compared with pre-arrival habits. 88% considered their current health good/satisfactory. While anxiety seemed to affect 10% of AS, 30% reported symptoms of depression, especially those arrived by sea (aOR 3.1) and with higher education. However, physical (94%) and mental (88%) health was considered improved/stable after arrival. Perceived health is overall good. However, AS by sea, with higher education or experiencing family breakdown suffer more from both physical and mental issues, especially depression. Long waiting times to grant refugee status and partial fulfilment of life expectations may worsen health conditions. Customised solutions in hosting centres may be encouraged, considering travel conditions and cultural background.

Key messages:

- Migrants' health in hosting centres is good; AS by sea, married and with higher education are more at risk, especially as regards mental health; depression warning signs must not go unnoticed.
- AS in hosting centres represent a heterogeneous population: they may benefit from a more tailored assistance, considering differences in travel conditions, cultural background and life expectations.

Health experiences of asylum seekers and refugees in Wales

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There are concerns that people seeking sanctuary (asylum seekers and refugees) in Wales, UK, have unmet health needs and face difficulties accessing services, but little collated evidence. This study addressed this gap to inform policy and practice in reducing health inequities. It aimed to: investigate the health, wellbeing and healthcare experiences of adults seeking sanctuary in Wales, including the views of healthcare recipients and providers; and establish what helped or hindered the healthcare experiences of those seeking sanctuary. It is the most comprehensive study of this population in Wales.

A mixed-method approach was taken, including a literature search, a cross-sectional survey of 210 adults seeking sanctuary, telephone interviews with 32 health professionals and third sector support workers, and 8 focus groups including 57 people seeking sanctuary and those supporting them.

Eight trained volunteer peer researchers, themselves asylum seekers or refugees, administered the surveys. Interviews were digitally recorded, transcribed and analysed using a standard framework.

The literature search identified 5 themes that help or hinder people seeking sanctuary to access healthcare. The survey found 79% of respondents attended an initial health assessment on arriving in Wales, with 94% currently registered with Primary healthcare. 64% reported difficulties in accessing health services. Awareness of services was mixed, with 66% having used healthcare in working hours (planned) and 28% out of hours (unplanned).

Mainstream health professionals felt they lack capacity to deliver care effectively due to time and other pressures on the healthcare system and the need for appropriate translation/interpretation services.

This study triangulates the experiences of people seeking sanctuary with those providing healthcare and general support. Peer researchers maximised sanctuary seekers' participation. Many of its methods and findings have relevance to other countries in Europe.

Key messages:

- Improving health equity is key to realising Wales' ambition to become a Nation of Sanctuary.
- Peer Researchers enabled participation by sanctuary seekers and revealed useful findings to steer future policy and practice.

Significance and challenges of assessing health literacy among migrants

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Background:

People with a migration background account for a large part of the population in many European countries. Although health literacy - knowledge, motivation, and competencies to process health information - is a key determinant of health, research on health literacy specifically among migrants in Europe is scarce. The aim is therefore to review and further develop the concept and assessment of migrant-specific health literacy for future use in a migrant health literacy survey (HLS-MIG) in Germany.

Methods:

A literature search in Pubmed was performed in April 2019 to identify studies regarding health literacy, health outcomes and knowledge among migrant populations in Europe. A special focus was put on the conceptualization and operationalization of health literacy among migrants.

Results:

So far, health literacy among migrants has mostly been measured using general health literacy measurement tools, that is, performance-based and self-assessment instruments as the HLS-EU-Q. Migration-specific competences, such as finding information about health in mother tongue, or outcomes of deficient HL have so far received little attention, except for e.g. the GMK-12, developed as a complement to the HLS-EU-Q16 in the Austrian context.

Conclusions:

The use of performance-based instruments in the local language primarily provides information about existing linguistic deficits, but hardly on competencies and abilities in dealing with health information. General self-assessment tools, on the other hand, allow the identification of such competences, difficulties and challenges. However, it is necessary to take greater account of migration-specific competences, habits and obstacles in the future, in order to develop tailored interventions for individuals and organizational aspects, supporting health information processing among migrants. Furthermore, studies also need to pay attention to migrant specific health problems and prerequisites.

Key messages:

- Research focussing on migrant health literacy is scarce.
- More attention needs to be paid to migrant specific competencies, habits and challenges.

Health among immigrants in Norway, results from the Living Condition Survey among immigrants 2016

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Introduction:

To manage immigrants̀ health needs is an important challenge for the society. This report gives knowledge about the status of immigrant health in Norway, which can be used in planning of health services.

Methods:

Statistics Norway carried out a Living Condition Survey among immigrants in 2016. We report the prevalence of health outcomes (self-reported health, cardiovascular diseases, hypertension, diabetes, back- and neck problems, impaired functioning, mental health problems, problems with sleeping, overweight) and lifestyle (alcohol, smoking, physical activity) by country of origin and assess associations between health and sociodemographic (age, education, income) and migration related (age at immigration, duration of residence, Norwegian proficiency) variables, as well as discrimination and employment. Immigrants from twelve countries were interviewed. The questionnaire was translated into the main languages in the twelve countries and English. In this report, 4399 participants aged 16-66 years were included.

Results:

There were large variations in health according to country of origin and gender. Immigrants experienced a deterioration in health at younger age than non-immigrants did. The educational gradient in health was less pronounced among immigrants than among others. Perceived discrimination was related to mental health problems. Some immigrant groups had a high proportion of smokers. In most groups a considerable proportion was drinking alcohol and a low proportion were physically active.

Conclusions:

Future research should take into account differences in health according to country of origin and gender. The importance of physical and social circumstances for immigrant health emphasizes the need for structural population-based initiatives to promote health.

Key messages:

- Immigrant health varies by country of origin and gender.
- Physical and social environment is important for immigrant health.

Access to abortion of undocumented migrants seen by Médecins du Monde in the Humanitarian Hub

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As of June 2017, the population of the Maximillian Park (an undocumented migrant camp in Brussels) is mainly Eritrean and Sudanese migrants who intend to continue their journey to the United Kingdom (Depraetere, 2017; Daher, 2018). In response to demanding needs, Médecins du Monde together with 8 organisations, created a one-stop service centre, The Humanitarian Hub, in January 2018 to offer a set of basic services to the migrants.

The Hub implemented a voluntary de-medicalized midwifery clinic. The medical team noted an under-representation of women, 40 out of 745 (5,4%), while the coordination team identified a number of complex unwanted pregnancies, many of which relating to violence. Accessing free abortion for undocumented women in Belgium requires the Urgent Medical Assistance certificate. This often takes several weeks, making it unrealistic to obtain in time for an abortion. Accordingly, the women or family planning centres cover the financial cost. The Hub's midwifery clinic thus focused on building trust with the women, and facilitated referrals to family planning centres.

By taking steps to create a more gender-sensitive Hub, the proportion of women seeking consultations doubled. In 2018, 955 out of 8990 (10,6%) patients were women, totalling 324 midwifery consultations. 65 of these women were pregnant, and the 23 who sought abortion were referred to family planning centres. None had Urgent Medical Assistance.

It is crucial to consider the particularities of a population and their social determinants of health when implementing a holistic system. For instance, focusing on violent experiences in medical consultations can help better understand women's situation. The coordination between The Hub and family planning centres helped in reducing barriers for migrant women. The project has seen success, thanks to the flexibility of the family planning centres in quickly receiving these pregnant women, and to the four centres who covered abortion costs.

Key messages:

- It is evident that the magnitude of these women's situation is undervalued, thus it is important to increase sensitization and advocacy in order to offer them greater support.
- The Hub has provided a number of services for undocumented migrants, notably abortion, and removed some barriers in accessing care. However, it is a fragile solution to a structural problem.

Empowering minor migrants: peer support program Nantes

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Background:

Under-aged migrants (UAMs) may see their legal minority unrecognised by the French state. If they confront this decision at court, they stand in a legal void. They can benefit from a direct access to State Medical Aid and are not submitted to a minimum period of 3 months of staying in France unlike adults. Moreover, when accessing care, unrecognised UAMs are in an unclear situation as they are minors without legal representation. This research is based on a newly created program ran by Doctors of the World (MDM) in Nantes, aiming to enhance UAMs access to health care and rights through peer-support. Peer-support is intended to develop the empowerment the UAM and help them to be able to be the authors of their life thus develop their own abilities (Le Grand, 2018). The role of empowerment in health access is established (Wallerstein, 2006). The research aims at identifying the obstacles and levers in the implementation of the program, the modifications it can cause in the program.

Methods:

The research is based on 3 months ethnographical observations, 9 formal interviews with UAM, 5 with professionals, and informal interviews.

Results:

We identify that volunteers share a different perception of what is empowerment. Some would leave quite a large autonomy to UAMs while others find it difficult to alter the organisation to give space to UAMs. Finally, self-help mainly develops abilities of those UAMs who were more resourceful.

Conclusions:

The analysis shows that a successful program of empowerment rely on shared views of its meaning. Moreover it shows that empowerment may help mainly those resourceful thus exacerbate some inequalities in ressources.

Key messages:

- The notions of empowerment and peer-support need to be well understood by all.
- Empowerment, as a side effect first exacerbates some inequalities of resources among UAMs.

Improving access to health of Migrants in France. Qualitative assessment of a national guide

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The National Public Health Agency and the Committee for the healthcare of persons in exile are providing, in the service of professionals, a Practical Guide for the care and the accompaniment of Migrants Foreigners living in precarious conditions, in France. The 2015 edition of this guide has been subjected to qualitative assessment in order to gather information regarding its use, the way it is perceived by its users, as well as their subsequent expectations, in order to design a new version that is more adapted to their needs.

The study was carried out in December 2018 by an independent market research institute with the following design:

- 24 face-to-face interviews, whose duration was 1h30min, involving current users or past users: 6 working in structures specialised in accommodation for migrants, 6 in health care facilities, 6 in municipal or departmental social service facilities.
- 3 focus groups, of 7-8 people, whose duration was 2H30min, involving potential future users of the guide.

The recruitment of the participants took place in 3 cities as well as the overseas departments.

The findings show:

- the legitimacy of this guide which is co-produced by an official national agency and an association recognized for its expertise.
- the interest of a transversal and multi-professional approach which allows to better grasp the social, legal and medical support and care
- the need for information and operational resources

This assessment underlines the relevance of the content and the symbolic importance of this guide which 'materializes' the needs in terms of access to the rights and health of migrant people, often overlooked by professionals and administrations. It is thus a vehicle of vocational training and advocacy on this subject. The study provides concrete ways of optimization, particularly via digitalization, in order to cope with the rapid obsolescence of information, the availability of local directories and the need for exchange of professional practices.

Key messages:

- A national guide co written by a national agency and an association is a relevant tool to draw attention to migrants needs.
- Qualitative assessment highlighted the operationnal and symbolic role of this guide to foster cross professionnal work.

Gender differences of health literacy in first and second generation migrants: A systematic review

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Background:

Health literacy, defined as all skills and capabilities that enable a person to access, understand, appraise and apply health information, is a key factor regarding disease management, health outcomes, and health-decision-making. Internationally, migrants have been identified as a high-risk group for limited health literacy. However, it remains unclear if female and male migrants process health information differently. This systematic review aims to analyze gender differences in the health literacy of first and second generation migrants.

Methods:

We performed a systematic review according to PRISMA guidelines. We searched OVID (MEDLINE), PsychInfo and CINAHL for original articles providing extractable data on the health literacy of male and/or female migrants. Two reviewers independently reviewed abstracts and full text articles for according to predefined inclusion criteria, including the use of a validated health literacy measurement tool, applying it to first and/or second generation adult migrants. We adapted a data extraction sheet from the Cochrane Collaboration for extracting relevant data. The included studies were evaluated against a standardized set of quality criteria.

Results:

Our search yielded 3411 records. We included 48 studies, of which 37 were conducted in the USA and Canada, with 22 focusing Hispanic and Asian immigrants' functional health literacy; the nine European studies examined a variety of work migrants and refugees using a comprehensive approach (e.g. measured by the HLS-EU-Q47). Thus, a strong heterogeneity in defining and measuring health literacy and in the populations examined can be stated. 15 studies exclusively examined the health literacy of women; none dealt with men only.

Conclusions:

The heterogeneity in defining and measuring health literacy in migrants as well as the diversity of the populations studied make it difficult to compare international research in this area. There is a lack of research focusing male migrants.

Key messages:

- International research on health literacy with gender-specific data on migrants reveals a strong heterogeneity in defining and measuring health literacy.
- International research on health literacy with gender-specific data on migrants reveals a lack of studies regarding male migrants' health literacy.

Episodes of violence suffered by migrants transiting Libya, Italy and France

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Background:

The Central Mediterranean is one of the most dangerous migration routes from Africa. Violence perpetrated to migrants in Libya and host countries has been documented but not rigorously quantified. The objective of the study was to estimate the prevalence of violence suffered in Libya, Italy and France by migrants consulting Médecins du Monde programs.

Methods:

Monocentric cross-sectional study. Inclusion criteria: migrants over 18 years old, transiting through Libya, arrived in Europe from 2017 and consulting in Saint Denis Health Center. Exclusion criteria: psycotraumatic manifestations. A sample size of 72 individuals was calculated. An ad-hoc questionnaire was created through Kobo Collect. Proportion and frequency of physical, privation and sexual violence, as well as health care and shelter access were measured in each country.

Results:

95 individuals were recruited and 72 were interviewed (16 refused 7 were excluded) from February to April 2019. 76.3% were men, mean age was 31.6 years, 76.4% had low educational level, 66.7% were from Ivory Coast and 58.3% left their country for security reasons. In Libya, length of stay was 180 days, global proportion of individuals suffering from violence (GPISV) was 98.1% for men and 88.2% for women. Prevalence of physical, privation and sexual violence was 94.1%, 84.3% and 17.6% for men, and 85.7%, 93.3% and 60.0% for women. Health care access in Libya was inexistent. In Italy, GPISV was 31.8% for men and 28.5% for women. Health care access was 41.4%. In France, GPISV was 20.0% for men and 12.5% for women and shelter access was 44.3%. 60.3% of the participants reported need of psychological support.

Conclusions:

The vast majority of migrants testify suffering from direct violence during migration, specially dramatic in Libya. Women have a particular risk of sexual violence. In Europe, the main problems are the lack of health care access in Italy and precarious living conditions in France. Mental health support is urgent.

Key messages:

- The vast majority of migrants testify suffering from direct violence during migration, specially dramatic in Libya.
- In Europe, the main problems are related to lack of health care access in Italy and the precarious living conditions in France. Mental health support is urgent.

Self Rated Health among Syrian refugees in Lebanon and Norway – a cross sectional study

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Background:

Refugees are often exposed to various stressors before, during and after migration that can cause adverse health effects. Prior research indicates that the health status of refugees is a significant factor in determining their success in resettlement. This study aims to assess self-rated health (SRH) and factors associated with SRH among Syrian refugees in Lebanon and Norway.

Methods:

The study uses a cross-sectional design with data from a self-administered survey among 827 adult Syrian asylum seekers of whom 506 were recruited in Lebanon, and 321 in Norway. Inclusion criteria were subjects who self-identified as Syrian nationals above the age of 16. The survey was conducted in 2017 and 2018 in collaboration with International Organization of Migration in Lebanon and through mandatory educational activities in Norway. Data analysis was performed for the main outcome self-rated health (SRH), a validated health status indicator, which was dichotomized into ''good'' and ''poor'' SRH. Odds Ratios for poor SRH were estimated adjusting for age, gender and country of residence.

Results:

A total of 827 of 972 (85%) who were invited answered the questionnaire. The mean age was 33 years and 74% were men. Factors associated with good SRH were being Kurdish (AOR: 0.48 (0.23 to 0.97)) compared to Arabic ethnicity, being married (AOR 0.54 (0.29 to 0.99)) compared to being single, migrating alone (AOR 0.59 (0.37 to 0.96)) compared to co-migration and having low health literacy level (AOR: 0.64 (0.42 to 0.93)). In contrast, poor SRH was significantly increased with long time in transit country/ies (AOR 1.49 (1.07 to 2.06)) and with older age (age 30-34 AOR 3.2, age 35-39 AOR 2.2, age 40 + AOR 2.6) compared to age group 16-24.

Conclusions:

Older refugees and those who stay long time in transit are at great risk of reporting poor SRH. Some of the factors associated with better health, like Kurdish ethnicity, low health literacy or migrating alone, deserve further research.

Key messages:

- Age and long stay in transit is associated with poor SRH among Syrian refugees.
- Demographic background and migrant related factors should be taken into account when planning refugee resettlement and healthcare provision.

Strategies to enhance follow-up response in a cohort study with Berliners of Turkish descent

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Background:

Follow-up participation and retention are essential in long-term cohort studies. Loss to follow up may reduce the power of statistical analyses and external validity. The aim of this analysis was to evaluate the response after different contact methods in a cohort study with Berliners of Turkish descent and to compare characteristics of participants with those of non-participants.

Methods:

In 2012-2013, Berliners with a Turkish migration background were recruited for this cohort study that initially aimed to examine recruitment strategies. The participants were contacted again 5 years later via postal mail and were asked to complete a questionnaire on the onset of new diseases and health care utilization. Written reminders, phone calls, and home visits were used to increase the response. Study documents were available in German and Turkish language. In descriptive analyses, we examined the response rate in relation to the recruitment approach. A regression analysis was conducted to investigate associations between individual, socioeconomic, and medical factors and the response.

Results:

Out of 560 contacted persons, the neutral non-response (unknown address or death) was 13.6%. Of the remaining 484, 234 persons participated in the follow-up (women: 63.1%, mean age±SD: 49.8±12.6 years). The response was 16.1% after the first invitation letter, 24.2% after phone calls, 33.3% and 42.1% with a first and a second reminder letter, respectively, and 48.3% after home visits. The participants had more often German citizenship and a higher net income at baseline than non-participants. Migration generation, age, sex, education, and chronic diseases were not associated with participation (preliminary results).

Conclusions:

In our participants with a migration background, every additional contact effort including home visits further increased cohort retention. Investing in comprehensive retention efforts may lead to studies that are more valid to examine the health of migrants.

Key messages:

- Investing in different contact efforts including reminder letters and home visits can improve follow-up response in longitudinal studies.
- Retention strategies should be used in longitudinal studies to increase statistical power and external validity.

Training development in the ORAMMA (Operational Refugee and Migrant Maternal Approach) project

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Background:

ORAMMA is a European capacity-building project (GR, NL, UK) for pregnant migrant, asylum-seeking and refugee (MAR) women to improve maternal and newborn outcomes. ORAMMA is an operational and strategic approach for mother-centred, community-oriented, gender-sensitive, interdisciplinary and compassionate care, to meet the needs of MAR women in Europe.

Objectives:

ORAMMA developed training for midwives and other primary health and social care (PC) professionals to meet the needs of MAR women. Methodology comprised three phases: evidence synthesis and needs assessment, training material development, and community enablement through locally recruited women in the innovative role of Maternal Peer Supporters (MPSs).

Results:

Needs assessment highlighted the need to train ORAMMA's teams of midwives and other PC professionals to care for women who suffered undue hardship, oftentimes leading to PTSD, i.e., victims of trafficking, rape, underage women, sufferers of acute or chronic conditions, and sole family carers. The experiences encountered informed curriculum development for midwives and other PC professionals. Interprofessional training for integrated perinatal care delivery was developed for and delivered in three phases, i.e., detection of pregnancy (GP coordination), care during pregnancy (midwive coordination), and support after birth (social worker coordination), with special modules developed in a participatory manner on: migration status and policies, maternity care for MAR women, and communication and culturally sensitive practices.

Conclusions:

Training midwives and other PC professionals along with members of MAR communities in the MPS role was identified to be a key element to efficiently support women and their families, to propagate key perinatal and public health messages, and to advocate for the rights of MAR women to ensure access equity to quality care in a highly responsive manner. ORAMMA's tools are available in easily accessible platform online.

Key messages:

- ORAMMA developed multilingual material to meet the needs of PC professionals and of MAR women, in an innovative manner and with high relevance for cross-border knowledge transfer.
- ORAMMA addressed key aspects in delivery and access, focusing on cultural awareness and communication; its relevance extends well beyond perinatal care to improved family outcomes and public health.

The factors affecting response rate in survey on well-being among people with foreign origin

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Background:

Previous population surveys among people with foreign background (PFB) in Finland have had successful response rates (62%-66%) when using mainly face-to-face interviews. A cross-sectional population survey (FinMONIK) explored more cost-efficient ways to collect the data on PFB.

Methods:

The data collection was conducted in Finland between May 2018 and January 2019. The random sample consisted of 12 877 (after removing over-coverage) 18-64-year-olds stratified by region. First, a letter containing a link to the online survey with 18 different language options was sent to the participants. After two reminders, the questionnaire was sent twice on paper to the non-respondents. Finally, supplementary phone interviews were carried out by multi-lingual interviewers. All the participants were able to enter in a draw to win gift cards.

Results:

The response rate (RR) for the online survey was 34%. RR was highest for those who had lived in Finland 5 years or less (43%) and lowest among the divorced (23%) and Estonians (27%). The paper questionnaire was mostly preferred by older age groups, increasing the RR of 40-64 year-olds from 31% to 48%. Telephone interviews increased the RR by five percent points, thus making the final RR for the survey 53%. Persons born in the EU and North-America responded the most frequently (58%) whereas RR was lowest amongst the Sub-Saharan African origin migrants (47%). RR was particularly low (42%) for those who had moved to Finland at ages 0-6.

Conclusions:

In surveys conducted amongst PFB, relatively good response rates can be obtained by using alternate methods for gathering data instead of costly and time-consuming face-to-face interview. Age and marital status seemed to affect the preference of survey format. The overall RR varied by country of origin.

Key messages:

- A good response rate can be obtained without face-to-face interviews in migrant population surveys.
- Migrant population surveys can be conducted more efficiently by combining a variety of methods.

Social Gradients in Alcohol Use Disorders with and without Depression: Immigrants vs Norwegians

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Background:

The social gradient in health runs from top to bottom of the socioeconomic spectrum. Poverty is associated with poor health and problematic unhealthy behaviors. Depression is strongly associated with social inequalities, while alcohol use disorders are not necessarily associated with a low socio economic status. Immigrants often have a lower social economic status than the host population. Research regarding alcohol use disorders, depression and a social gradient among immigrants is scare. The present study explores social gradients in persons with alcohol use disorders with and without depression and examines potential discrepancies between immigrant and native Norwegian patients receiving public specialist health care.

Methods:

Data of 2.4 million native Norwegians and 468.496 immigrants, registered in the national mandatory Norwegian Patient Register and population data from Statistics Norway were analyzed. ICD 10 main diagnoses were used to identify patient groups - at least diagnosed once during 2008 - 2016. Immigrants had been pooled into 5 world regions. Logistic regression models have been applied to show associations between socio demographics/regions and alcohol use disorders and/or depression.

Results:

African (OR = 0.35; 95%CI:0.27-0.44) and Asian (OR = 0.23; 95%CI:0.16-0.32) immigrants had a lower risk of developing alcohol use disorders with depression than Western Europeans (OR = 0.76; 95% CI:0.60-0.98), using native Norwegians as a reference. In general, persons with a lower socioeconomic status are more often affected of alcohol use disorder only (OR = 3.77; 95%CI:3.64-3.91) than with alcohol use disorder and concurrent depression (OR = 3.52; 95%CI:3.25-3.83).

Conclusions:

To detect possible deficits in patient care, knowledge of social gradients in a marginalized group such as persons with alcohol use disorders and/or depression is essential. This may contribute to targeted and individualized health care- regardless of immigrant status.

Key messages:

- The risk of developing alcohol use disorders with depression varies between immigrants according to their origin.
- Persons with a lower socioeconomic status are more often affected of alcohol use disorder only than with alcohol use disorder and concurrent depression.

Sustained virological response to Do hepatitis C DAA treatments in migrants and non-migrants groups

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Background:

Although the efficacy of direct acting antivirals (DAA) against hepatitis C (HCV) has been widely proven, data lack on their effectiveness in the most vulnerable groups. In France, despite universal health coverage, migrants cumulate vulnerabilities including delays in screening that may affect both access to care and treatment effectiveness. We tested whether DAA-treated migrants had sustained virological response (SVR) rates comparable to not-migrants.

Methods:

We used data collected in chronic HCV-infected patients of the ANRS CO22 HEPATHER cohort, receiving a first treatment with DAA, with follow-up from 2012 until 2022. SVR was measured by PCR, 12 weeks after the end of treatment. The main covariate was a 4-category variable comparing migrants and non-migrants, with or without other vulnerability conditions (including drug use, unhealthy alcohol use, living in poverty, being a man who have sex with men). We used a Poisson regression model to assess the relationship between this covariate and SVR after adjustment for significant predictors and potential confounders.

Results:

The analysis included 5,080 individuals, of which 17% classified as migrants with at least one vulnerability, 10% as migrants with no vulnerability, 39% as non-migrants with at least one vulnerability and 35% as non-migrants with no vulnerability. Median [IQR] age was 57 [51-65] years, 56% of individuals were men, and 96% had SVR. The multivariable analysis showed no significant difference between the 4-category covariate and SVR. In addition, we found that SVR rates increased steadily during follow-up.

Conclusions:

This is the first analysis exploring differences in SVR rates among migrants and not-migrants. The lack of significant differences found despite the power of the study suggests that migrants respond to DAA treatment as well as any other group of HCV-infected patients. These data can help advocating better screening and access to treatment for HCV-infected migrants in France.

Key messages:

- No significant differences were observed between migrants and non-migrants in terms of effectiveness of DAA treatment.
- These findings can help improving access to HCV care for migrants.

Factors related to emigration self-efficacy among university students in Slovakia

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Background:

Emigration self-efficacy (ESE) as the confidence in onés ability to successfully handle migration is an important characteristic of a migrant. We hypothesized that positive migration experience might increase ESE. We also explored whether personality factors such as extraversion, openness to experience, neuroticism, conscientiousness and agreeableness might be related to the ESE of young people (under 30 years old) in

Slovakia. The moderation effect of gender in the relationship between the independent variables and ESE was also tested.

Methods:

The sample consisted of 474 students from Slovakia (76.8% women, M = 22.4, SD = 2.13) all participating in the Student Life Cohort Study (SLiCE 2016) which focuses on the emigration intentions and risk behaviour of university students. The data were collected via an online survey. Standard multiple regression was used and the analysis was adjusted for gender.

Results:

The model explained 23.1% of the variance in ESE. An evaluation of migration experience was found to make the largest unique contribution in explaining ESE ($\beta = 0.317$, $p\alpha<0.001$). Regarding personality factors, only neuroticism was found to be significantly related to ESE ($\beta=-0.155$, $p\alpha<0.05$). The main effect of gender was also significant ($\beta=-0.179$, $p\alpha<0.001$) with males scoring higher in ESE although the moderation effect of gender in the relationship between the independent variables and ESE was not significant.

Conclusions:

This study provides an insight into the role of personality factors and evaluation of migration experience in relation to ESE among Slovak university students. Future research may focus on a deeper exploration of the other factors affecting neuroticism, as reducing the level of neuroticism could be beneficial in experiencing healthier and safer migration and adaptation process.

Key messages:

- A more positive migration experience and lower level of neuroticism are related to emigration self-efficacy among university students in Slovakia.
- Emigration self-efficacy is an important factor of healthy migration.

Bridging Generations: Sharing stories from the past with the future

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Background:

As the immigration population continues to grow; little is known about this phenomenon from the immigrants' perspective. In recent years, nurses have embraced narrative inquiry to better understand the human experience. When relaying their stories, vulnerable groups legitimize their behavior, share their emotional experiences, and amplify their voices that may have otherwise remained silent.

Objective:

Eight elderly Portuguese women who immigrated to the United States (US) were interviewed about their experience of immigration by nursing students from Portugal and U.S., as part of a student exchange. The objective of this project was to better understand the impact of immigration through narrative inquiry.

Results:

On average, the women lived in the US for approximately fifty years; immigrating in their early twenties. Most women arrived alone or accompanied by spouse and/or children. Their first memories were related to snow, and solitude of being in a new country. The participants attended classes to obtain documents or learn English. All worked in the textile industry; their greatest accomplishment was buying their own house. Challenges faced were related to language and difficult jobs. Overall, they had no regrets except in leaving family members behind. Their message to the students was that love and family are most important in the world. Students were able to realize emigration and immigration from their respective countries.

Conclusions:

Rich descriptions provided an in-depth understanding of the details of the women's experience. Student nurses gained valuable skills and knowledge to understand the impact of immigration among Portuguese women using narrative inquiry.

Key messages:

- The use of narrative inquiry proved to be a valuable method to interview Portuguese immigrant women.
- Every immigrant has a unique narrative to share that allowed for nursing student's appreciation of the experience across generations.

Health-Related Quality of Life in resettled refugee youth

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Aim:

Millions have fled from the Civil unrest in Syria and half of these are children and youth. Although they are a population with elevated risk for health problems due to adverse pre-migratory and post-migratory experiences, few studies have explored their Health-Related Quality of Life (HRQoL). This is considered a fundamental construct in public health and might provide complementary descriptions of their health and wellbeing after resettling in a new country.

Methods:

A cross-sectional survey of 160 Syrian youth aged 13-24 years recently resettled in Norway, was carried out in 23 schools. Using KIDSCREEN-27, results from five dimensions of HRQoL (physical and psychological wellbeing, parental relations, school environment and friends) was compared to norm populations and analysed with associated sociodemographic factors and war related adverse events.

Results:

Preliminary results indicate that for most participants the overall HRQoL was good, but lower in the dimensions for physical and psychological wellbeing and friends than in norm populations. Satisfaction with parental relations and the school environment was high and the main contributors to a positive HRQoL in the participants. Age and number of reported Stressful Events had the greatest impact of all the the included variables, but all correlations were small to moderate and therefore accounted for little of the total variance.

Conclusions:

The findings suggest that HRQoL is a relevant and non-invasive measure for refugee youth. Interventions focussing on general psychological wellbeing and networks could be beneficial for the group, and need to be explored. These interventions could potentially be based in schools or in family work, to benefit from these being seemingly safe environments for the majority of the group.

Key messages:

- Health Related Quality of life in young Syrian refugees was good, but lower in the dimensions for friends and psychological wellbeing than for norm populations.
- Satisfaction with parental relations and school environment was high among the Syrian youth and the main areas that contribute to a positive Health Related Quality of Life.

Health and behavioral changes among international students at the University of Georgia

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Background:

During last decade the number of international students is rising not only in developed, but in developing countries. In this matter, Georgia is not an exception. In 2006-2016, country enrolled more than 13 000 International students in 127 English language programs in 33 Higher Education Institutions. Study aimed to investigate health and lifestyle changes among international students of one of the largest universities of Georgia.

Methods:

A cross-sectional survey was carried out in 2018 by web-based anonymous questionnaires among international and local students at the school of health sciences (UoG). Data was obtained on self reported physical health conditions, dietary patterns, physical Activity, sleep, study routine, smoking, alcohol and drug consumption, sexual life and stress factors.

Results:

112 local and 50 international students of UoG from more than 10 countries participated in online survey. 77% of local and 37% of international participants were female. Students reported health problems related to digestion (43% local, 23% int), musculoskeletal system (20% local, 33% int), sleep (62% local, 43% int), skin, hair and nail (29% local -28% int) after attending university. 22% of international students reported to start smoking after coming to Georgia and 50% evaluated own stress level as 7 out of 10 point scale. Moderate positive correlation was found between stress and health problems among international students ($r = 0.447$, $p = 0.005$). As a main stress factors international students indicated study routine, homesickness, sleep and financial difficulties.

Conclusions:

Survey results indicate that social and physical environment changes as well as busy time schedule can be led to different health problems, and lifestyle changes among international students of UoG. Hence, health promotion campaigns, even among students of health sciences might play supportive role.

Key messages:

- 22% of international students of UoG reported to start smoking after coming to Georgia and 50% evaluated own stress level as 7 out of 10.
- There is a need of health promotion campaigns, even among students of health sciences.

Factors influencing the migration intention of dental and medical graduates in developing countries

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Background:

Migration of skilled health workers could result in shortage of human resources and rising inequalities in service provision in source countries. To date, most of relevant papers are focused on rate and reasons of migration while the need for conducting studies on modelling of factors is more vividly felt. The aim of this review was to determine the factors influencing the migration decisions of medical and dental graduates migrating from developing countries and to introduce a practical conceptual framework for health worker migration.

Methods:

Electronic databases PubMed, Google Scholar and relevant Journals were systematically searched for English language publications from January 2009 to April 2019. The inclusion criteria were: 1) article stated factors affecting migration decisions of medical doctors and/or dentists, 2) the source country in the study was a developing country, 3) participants' primary qualification country was in a developing country,4) the study used primary data both qualitative or quantitative.

Results:

The search identified 814 articles from which we included 23 full-text studies after applying eligibility checklist. Push and pull theory was the most popular model to describe the migration driving factors. Poor socio-economic situation, political instability, lack of professional and educational opportunities together with family concerns found as strong common push factors that perpetuate migration. The most influencing pull factors were desire for better quality of life, career and training opportunities and financial gain.

Conclusions:

Despite the fact that health workers migrate for different reasons, they follow a same route for decision to stay or leave their own countries. Un-fulfillment of expectations in mother land in addition to media reconstructed reality of life in foreign land can develop a positive attitude for migration Which should be considered before weighing up the push and pull factors of both sides.

Key messages:

- A better understanding of the migration motives of health professionals will help health authorities to improve their workforce recruitment and retention strategies and health service planning.
- Our simple yet comprehensive framework can mainly identify the development of migration desire through combining different models and concepts of migration, behavioral change, values, needs and so on.

The impact of precarious employment on the health and wellbeing of immigrants: a systematic review

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Background:

Migration and precarious employment are social determinants associated with adverse health outcomes. In the United Kingdom, migration policy and labour market characteristics mean that migrants are often engaged in precarious work. We synthesise evidence on the experiences of migrants and explore the effects of precarious employment on their health and wellbeing.

Methods:

Electronic databases were searched for peer-reviewed qualitative studies describing the experiences of United Kingdom migrants in precarious employment. Title and abstracts were screened, followed by full text screening using pre-specified inclusion and exclusion criteria. Data on employment experiences and effects of working conditions on physical and mental health and perceived wellbeing were extracted. The Centre for Reviews and Dissemination (2009) framework was used to conduct a narrative synthesis.

Results:

Out of 1577 unique citations, 5 met our inclusion criteria. All included studies reported negative outcomes on physical and mental health. 2 reported positive or negative outcomes for perceived wellbeing depending on pre-migration experience. Musculoskeletal pain, exhaustion, anxiety and depression were commonly reported effects of precarious employment. Communication difficulties and over qualification were identified as migrant specific factors influencing health outcomes.

Conclusions:

Stress response theories and risk factors associated with occupational injury explain how employment specific factors influence health. Extrinsic factors such as immigration policies, pre-migration experience, responsibilities in home country and acculturation mediate precarious employment effect on health.

Key messages:

- Migrants feel isolated in precarious employment and are vulnerable to negative mental and physical health impacts.
- Broader migration related policies impact on experiences of employment and health.

Combined sexual prevention targeted to LGBTI+ migrants: between 'outdoor' and 'indoor' hospial

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Issue:

It is estimated that there are about 10,000 HIV-positive and undiagnosed people in Île-de-France (French region). They are composed of 70% men, 40% of whom are MSM and 40% of sub-Saharan African migrants. A bridging process has been designed by the Public Health association AREMEDIA and developed in partnership with Fernand-Widal Hospital's testing center, to reach underserved populations. From March 2018, a screening test session for sexually transmitted infections (STIs) is taking place weekly in the hospital walls. This action is dedicated to the population of ARDHIS association, which accompanies more than 1,000 people each year, seeking asylum because of their sexual orientation or gender identity.

Description of the problem:

Despite the promotion of this 'indoor' targeted consultation via ARDHIS volunteers and directly to asylum seekers during occasional community events, the consultation only allowed the screening of 23 people in 4 months. It has been decided to carry out screening 'outside the hospitals walls', where the people are, in order to promote the return of results, treatment, access to PrEP, HBV vaccination at the weekly indoor hospital consultation. ''Community health relays'' training together with the development of phone contact procedures were developed to facilitate the access to the indoor consultation.

Results:

The methodology made it possible to double the average number of consultations over the following 5 months from 5 to 10 consultations per 3-hour slot, not counting PrEP appointments and vaccines, which averaged 6 per session. By the end of 2018, 261 people were screened, 23 had a PrEP treatment and many were vaccinated. As the scheme continues to develop, the results from January to July 2019 will be reported.

Leçons:

- To reach the most at risk populations, specific public health approaches are needed, taking account the context and representations of the target populations.
- Community involvement has proven to be effective.

Key messages:

- To fight HIV, innovative devices are needed to reach targeted populations.
- This has allowed hundreds of LGBTI asylum seekers to be screened and a significant number to receive preventive treatment.

Experiences of specialist social workers for asylum seeking patients at a large Swedish hospital

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Background:

In 2016, the Karolinska University Hospital introduced a one-year-project with a mobile team of five asylum social workers (ASW), specializing in migration. This study evaluates the ordinary hospital social workers (HSW) experiences of introducing ASWs for asylum seeking patients.

Methods:

Descriptive analysis was made of answers from a questionnaire sent to all 144 HSW at the hospital (57% response rate). Qualitative content analysis was made of written comments.

Results:

Of the HSWs, 51% always and 29% sometimes contacted an ASW in relation to asylum seeking patients. Of those who contacted an ASW, 74% stated that the ASWs increased the efficiency of care of asylum seeking patients. 65% agreed that ASWs had an improving effect on the quality of encounters between staff and asylum seekers. Also, 67% agreed that the ASWs off-loading function improved the HSWs working conditions. Even though the ASWs were working at two hospitals located in different parts of the region, 78% of HSWs found them to be available. The main reason to not always contact an ASW was that it was not necessary in the specific case (55%). A majority (66%) reported increased knowledge about asylum processes as an outcome of introducing the ASWs at the hospital. This was also highlighted in the written comments, where ASWs detailed and updated knowledge as well as established contacts with e.g. the Swedish Migration Board was emphasized. ASWs specialist competence enabled patients to quickly receive legally correct and accurate information, which decreased worries among patients as well as staff members.

Conclusions:

The HSWs described the ASWs as being important to patients as well as to staff. The ASWs improved the quality of encounters between staff and asylum seekers and strengthened the patient's right to health and social care. The HSWs also reported an off-loading function, improving the working conditions and the over-all efficiency of care.

Key messages:

- The HSWs found that the ASWs increased the efficiency of care and quality of encounters between staff and asylum seekers.
- ASWs detailed knowledge and established external contacts enabled patient to receive accurate information quickly, which decreased worries among both patients and staff members.

Syndromic infectious disease surveillance of refugees in Greece: a mixed methods analysis

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Background:

An estimated 1,174,140 refugees have migrated into Greece, a main entry point for refugees into Europe, since 2014. Their infectious disease profile is monitored by a national-level ad-hoc syndromic surveillance system in refugee-migrant reception centres. The utility of this system is explored to contribute evidence to and improve syndromic surveillance in European refugee responses.

Methods:

Proportional morbidities, numbers of cases and signals, cases above expected numbers, of 14 syndromes are collated from weekly reports between 2016-2019, graphed and analysed in the context of the humanitarian response. Semi-structured key informant interviews are conducted and thematically analysed.

Results:

Between 20.06.2016 and 17.02.2019, 36358 cases and 116 signals occurred. Public health responses resulted and there were no significant outbreaks. On average 5% of all consultations in centres were on infectious syndromes. Respiratory infections with fever (57%), gastroenteritis (22%), suspected scabies (13%) and rashes with fever (5%) were most commonly reported. Every week, between 68-100% of 25-58 participating centres completed reporting adequately. 6 informants reported on their syndromic system user experience. The system's benefits, providing information and safeguarding refugees, outweighed harms. Data was timely and complete, but likely under-reported for common conditions. Poor living conditions and inter-agency coordination complicated reporting and public health responses.

Conclusions:

Infectious burdens and trends were provided by the system and allowed for timely responses. Data quality was adequate. The system was valuable and feasible to informants. The set-up of the humanitarian response, inadequate ownership and poor coordination of authorities reduced the system's utility.

Key messages:

- Syndromic surveillance is useful for monitoring refugee infectious health.
- Structural barriers need to be resolved to improve systems' data and user experience.

The influence of culturalisation on GP consultations and in research on GP care

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Background:

General practitioners (GPs) have a gatekeeping function in the healthcare system. Research shows that patients of Turkish origin in Germany manage to access specialist care less often than non-immigrant patients. Underlying could be problems related to interactions with the GP. Focusing on interaction instead of individual patients' characteristics might help identifying underappreciated barriers in health care.

Methods:

We conducted a scoping review to identify research on interaction-related aspects of GP consultations of people of Turkish origin. Goffman's interactional theory was used for operationalisation. Analysis focused on the process of consultation from the perspectives of patients, GPs, and interpreters. Additionally, noticeable issues in researchers' perspectives on migrants' utilization of health care were identified.

Results:

Patients of Turkish origin expect similar professional performances from their GPs as patients without a migration background. If informal interpreters take part, misinformation might remain unrecognised. Frequently, GPs experience insecurity, which sometimes results in lower empathy and prejudice-based, unprofessional reactions or misdiagnoses. Researchers' interpretations refer partly to unfounded explanations such as a homogeneous Turkish culture or somatization tendencies of Turkish patients.

Conclusions:

Difficulties in GP care of patients of Turkish origin, and access barriers to specialist care, arise less from culture-bound performances of these patients as from culturalising expectations and performances of GPs. Researchers often show similar expectations and interpretations. Such culturalising interpretations should be avoided in future research.

Key messages:

- Difficulties in GP care of patients of Turkish origin, and access barriers to specialist care, arise less from culture-bound performances of these patients as from culturalising expectations of GPs.
- Future research should avoid culturalising interpretations.

Ethnic differences in participation in diabetes education programmes

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Background:

Immigrants from non-Western countries have a higher prevalence of type 2 diabetes. In addition, immigrants have an increased risk of developing diabetes complications, compared with the general population. Diabetes education programmes facilitate essential knowledge and skills that enable people to manage their condition in daily life. However, fewer immigrants attend and complete diabetes education compared with the general population. The aim of this study is to explore what characterises those who decline and accept participation in diabetes education in relation to ethnicity, household composition and diabetes burden in the family.

Methods:

The study population consisted of adults with type 2 diabetes referred to a municipal diabetes centre (n = 1819). Individual medical record data was linked to national registry data. Descriptive statistics and logistic regression models were applied.

Results:

Preliminary results showed that 23% of individuals from the study population participated in diabetes education. We found no overall differences in participation rates between the general population and non-Western immigrants (24% vs. 18%, P = 0.12). However, when examining the immigrant groups by language (Arabic, Urdu and Turkish), the results indicated a non-significant tendency: Urdu speaking groups' participation was similar to the general population (24%), whereas Arabic and Turkish speaking groups had lower participation rates (17% and 11%, P = 0.25/0.40).

Conclusions:

The results suggest that there are differences in participation between some immigrant groups and the general population. Increased knowledge about which mechanisms affecting participation in diabetes education programme is required to ensure equal access. Further studies and analyses will explore how immigrants' social relations enable and/or hamper participation in diabetes education and investigate which factors can be changed to improve participation rates.

Key messages:

- There are differences in participation in diabetes education programmes across different ethnic groups, which suggests a need for in-depth analysis into which mechanisms that affect participation.
- The results will be used to give input for future practices that can increase immigrant's participation and retention in diabetes education programmes.

Country Assessments: Identifying gaps in policy and practice to address equity in health for migrants

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Issue:

The Joint Action on Health Equity in Europe (JAHEE) aims to address inequities in health across all groups. Work Package 7 Migration and Health (WP7) includes 13 partner countries and focuses on health inequities affecting the migrant population. The project started out by developing Policy Framework for Action (PFA), intended to form the basis for exploring opportunities for appropriate actions in the three-year implementation period of the action. The PFA formulated a 'road map' encompassing six priorities identified in 22 'soft policy' documents that have been published by international / governmental organisations since 2007. It also discussed the state of the art in research on the causes of particular inequities undermining migrant health, as well as the measures that can be taken to tackle them.

Description of the problem:

The main objective of the Country Assessments (CAs) is to identify the best opportunities (entry points) for developing country-specific actions. From this list, actions will be selected and implemented that are feasible within the constraints of JAHEE. The CAs will provide the information partners need in order to make informed choices. The assessments will indicate where the most serious inequities lie, what causes them, and what can be done about them. The CA Template was based on the PFA, reviewed by the Expert Group and then piloted in two countries (Norway and Italy) in March 2019. The 13 partners participating in WP7 are currently carrying out their assessments, which will be completed by July 2019.

Results:

An overview of the main results of the CAs will be presented at the conference.

Lessons:

Developing and piloting the Country Assessment Template has been participatory, with necessary revisions on the basis of experience. Completing these assessments for each participant is in itself is the first step towards action. Participants create an overview of available data, experiences and gaps in their countries.

Key messages:

- The Country Assessment Template is a tool that enables partners to take stock of the situation in their country.
- Analysis of data from the assessments will enable countries to make an appropriate choice of actions.

Characteristics of specialist consultations regarding immigrant patients at a large Swedish hospital

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Background:

After an increased number of asylum-seeking patients, the Karolinska University Hospital in 2016 introduced a one-year-project with five asylum social workers (ASW). This study analyzes the characteristics of patients, issues and performed tasks.

Methods:

The data consists of five months anonymized case documentation of ASWs direct patient contacts and documented telephone consultations with staff. Descriptive statistics and qualitative content analysis were made.

Results:

Of direct patient contacts, 56% were with asylum seekers, 7% undocumented, 7% EU citizens and 30% had various forms of migration status. Tasks consisted of 39% external cooperation, 15% writing certificates, 20% applying for e.g. social assistance for patients' basic needs.

Analysis of telephone consultations with staff showed that 24% concerned patients with unclear migration status, 17% undocumented, 14% asylum seekers, followed by various forms of migration status. The issues related to patient rights (17%), housing and discharge problems (17%), subsidized health care (11%), costs for care (10%), social assistance (8%) and national registration and establishment (8%). Performed tasks by ASWs were legal advice (19%), referral for further management (19%), advice about cooperation with e.g. the Swedish Migration Board (14%), costs for health and social care (13%), social support (11%), health care administration (10%), application for visa or passport (8%) and the right to subsidized health care (7%).

Conclusions:

ASWs performed tasks concerning cooperation and advisement regarding care-planning and legal concerns, helping both patients and staff. Staff were often insecure about immigrant patient's legal status and right to health and social care. To optimize support to staff regarding asylum-seeking patients, it is recommended to use a broader definition of migration status to include unclear cases.

Key messages:

- The hospital staff were often insecure about immigrant patient's legal status and consultation should thus address various forms of migration status among patients.
- The hospital staff needed consultation regarding legislations, discharge, housing, social assistance and costs for and right to health and social care.

Optimum control of TB in the EU by addressing migrant health effectively in an interconnected world

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Worldwide, tuberculosis is one of the top 10 causes of death. Although most EU/EEA countries are low-incidence, TB remains a public health issue. In this region, TB predominantly affects vulnerable populations, including migrants (ECDC/WHO, 2019). Since migration has been increasing over the last several decades, the health needs are considerable and merit great attention for several reasons. First, migrants have a right to health. Second, health promotion and disease prevention among migrants contributes to overall public health. Last, healthy migrants contribute to positive development outcomes (WHO, 2016) (IOM, 2017).

In order to meet the health needs of migrants, prevention is an important step. Part of preventive care is detecting illness at an early stage (for example by screening), so that treatment can be introduced when it works best (WHO Europe, 2018). However, screening of a population is only beneficial if a positive result leads to effective actions independent of geographic location (Jackson, 2017).

So, how does one facilitate a fluid care pathway for TB-elimination? In the Netherlands, the Community Health Services (GGDs) carry out TB-control non-geographically. All 25 GGDs use iTBC, a nationwide, integrated platform that supports and connects all TB processes, independent of place and time. The appropriate TB screening pathway is selected, based on prevalence in country of birth, for all migrants resulting in optimized screening, treatment and control. In a PPP between Topicus, the Dutch Association of GGDs (GGD GHOR Nederland) and the Central Agency for the Reception of Asylum Seekers, this process has been automated for asylum seekers. By safely sharing relevant data, migrants can be screened and treated effectively. Resulting in health needs of migrants being met and optimum control of TB in low-incidence countries. The aim is to screen, treat, control and end tuberculosis whilst scaling the Dutch blueprint across the EU/EEA region.

Key messages:

- TB-screening contributes to EU public health if follow-up actions are facilitated non-geographically.
- The Dutch blueprint for TB-control shows how migrant health needs are met in an interconnected world.

Family conflict mediates the relationship between past violence and wellbeing among female refugees

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Background:

Past exposure to violence has been suggested to have a lasting effect on subjective well being (SWB). Similarly, family conflict is another known predictor of SWB. Research shows that refugee women exposed to gender based violence (GBV) before resettlement may also face post-resettlement family conflicts due to socio-cultural factors, changes in social network and migration-based shifting gender roles. This study examines the role of family conflict as a likely mediator between past exposure to violence and SWB among Syrian refugee women in Sweden.

Methods:

A total of 452 women out of a random sample of 1215 Syrian refugee women in Sweden responded to a questionnaire survey in Arabic. Variables include Past violence i.e. exposure to any of torture, physical or sexual violence preflight or during flight before arriving Sweden; Post-resettlement distressing family conflicts i.e. feeling disrespected or unimportant in the family or distressing conflicts; SWB was measured by WHO-5 wellbeing index. Maximum likelihood estimation with Robust standard errors and bias corrected bootstrapped 95% confidence intervals for all estimates.

Results:

Total effect of past violence on SWB was significant (Estimate = -6.63; CI = -12.73 - -0.46). Similarly, family conflicts were associated with decreased SWB (Estimate = -3.80; CI = -5.17 - -2.40), and past violence exposure increased family conflicts (Estimate = 0.57; 0.13 - 1.08). The total effect of violence exposure on decreased SWB was decomposed into a direct and an indirect effect (mediated via family conflicts). The indirect effect via family conflicts was significant (M = -2.19; C1 = -4.30 - 0.59), while decomposing rendered the direct effect non-significant (Estimate = -4.44, CI = -10.51 - 1.52).

Conclusions:

Post-resettlement distressing family conflicts mediate the effect of prior exposure to violence on reduced SWB among refugee women.

Key messages:

- Past violence exposure reduces refugee women's SWB via aggravated family conflicts implying the need for family targeted interventions to improve SWB of female refugees previously exposed to violence.
- Strategies to improve subjective wellbeing among female refugees should include screening for and addressing all forms of previous and ongoing GBV.

Maternal country of birth and in-hospital exclusive breastfeeding: results from a Portuguese study

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Background:

Breastfeeding provides benefits for children, mothers, society and the environment. The promotion of optimal breastfeeding, from an early stage in life is, therefore, a public health priority. Infant feeding can be influenced by maternal country of birth. However, studies carried out in European settings point to inconsistent findings. This study aims to compare first day in-hospital exclusive breastfeeding among migrant and native women in Portugal.

Methods:

This study is based on a national project on perinatal health among migrants and natives in Portugal (baMBINO). Out of 39 public maternity units in mainland Portugal, 32 were enrolled. Women aged 18 years old or older with a live birth were recruited. The final sample included 5109 participants (2431 natives and 2678 migrants). Logistic regression was used to assess the association between maternal country of birth and in-hospital exclusive breastfeeding.

Results:

Migrant participants included women from Portuguese-speaking African countries (PSAC) (49,7%), Brazil (18%), Eastern Europe (10.2%), other European countries (9.6%), Asia (5.5%) and other countries (7.0%). No differences were found between migrants and natives, with the exception of women from PSAC who were more likely to exclusively breastfeed during the first day of hospital stay (aOR 1.34 CI95% 1.05-1.72), irrespective of maternal age, education, parity, type of pregnancy, reproductive assistance, tobacco use, gestational age, newborn birth weight, mode of delivery and antenatal care.

Conclusions:

In Portugal, women from PSAC are more likely to exclusively breastfeed their babies during the first day of hospital stay when compared to native women. Strategies to maintain healthy breastfeeding practices in this population are fundamental.

Key messages:

- Women from PSAC are more likely to breastfeed exclusively in the first day after delivery than Portuguese natives.
- They should be supported in the maintenance of optimal breastfeeding practices.

The way towards Migrant Sensitive Occupational Health Care System

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Background:

The European Union (EU) is facing to the demographic challenge of the ageing society on the one hand and a growing influx of migrants on the other hand. Although since 2008 WHO repeatedly called member states for developing 'migrant sensitive' health care system, still there is a significant shortage in education programs, aiming to build the required human capacity in general, and on the field of occupational health, no any initiative could be observed aiming to empower the service providers with the additional knowledge and skills for facilitating the safe integration of the migrant workforce into the EU's economy.

Objectives:

University of Pécs Medical School (UPMS) has integrated migrant and ethnic minority health - as a new overarching topic - in its optional and/ or regular training program. Occupational health and migration belongs to the compulsory part of the education.

Results:

Each study year more than two hundreds Hungarian, English and German speaking medical students meet at least at a 'sensitization' level the migrant specific aspects of occupational health. In order to improve and - in the need - even extend our program on this field, we have launched a 'quick response' questionnaire research among the students, asking for their opinion, how they see the importance and necessity of this topic within the frame of their medical training. 67 % of the 2012 students highly and/ or mostly agreed with our initiative and 87 % founded the topic very relevant. The majority of the students have expressed that the training has changed their views.

Conclusions:

The endowers of UPMS, as a WHO Collaborating Centre on the field of migration heath training and research are in accordance with WHO newly adopted 'Strategy and action plan for refugee and migrant health and achieves every year several hundreds of medical students who are already 'sensitized' towards the health of migrants.

Key messages:

- EU economy needs migrant sensitive health workforce ont he field of occupational health.
- Medical studens understood the need for migration health training.

Health system resilience – a conceptual and empirical review of health system literature

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Background:

The concept of health system resilience has gained popularity in the global health discourse, featuring in UN policies, academic articles and conferences. The term is commonly used to refer to the ability of health systems to respond to challenges. However, there has been no comprehensive overview of how the concept is understood and assessed in health systems research (HSR).

Methods:

We conducted a conceptual and empirical review in 3 databases using systematic methods. Quantitative and narrative synthesis was used to trace the introduction of the concept to HSR, identify relevant definitions and examine its use in research.

Results:

From 4063 references, we identified 96 articles concerned with health system resilience from 2007 - 2017, with a recent increase in literature (45% of studies published since 2016). Many articles take a general perspective; others focus on specific HSR building blocks (e.g. 28% on service delivery) or a particular type of crisis, such as climate change (12.5%) or natural disasters (10.4%). While the concept was developed from the ecological sciences, its meaning has been adapted in HSR, with a shift towards people-centred and process-oriented definitions. We identify three frameworks operationalising resilience: the ''attributes'' framework by Kruk et al. (2017), the ''everyday resilience'' framework by Barasa et al. (2017) and the ''complex adaptive systems'' framework by Blanchet et al. (2017). However, we find a mismatch between these frameworks and how the concept is assessed in 13 quantitative and 8 qualitative empirical studies.

Conclusions:

The HSR literature has converged around a definition of resilience focusing on the system's ability to mitigate ongoing challenges. Differences in emphasis remain, resulting in a variety of operational frameworks. The frameworks require further adaptation and testing in empirical studies to demonstrate the usefulness of ''resilience'' as an analytical category in HSR.

Key messages:

- There is a mismatch between conceptualisation and operationalisation of resilience in the HSR literature.
- Existing operational frameworks of resilience require further adaptation and testing in empirical studies to demonstrate the usefulness of ''resilience'' as an analytical category in HSR.

The benefits and challenges of cash transfer programmes in Greece, with a focus on protection

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Introduction:

This qualitative study evaluates cash transfer programmes (CTPs) in forcibly displaced populations, specifically in Greece. There is a focus on protection, encompassing health, gender, child protection and disability. The Greece Cash Alliance, run by the United Nations High Commissioner for Refugees (UNHCR), currently supports 63,853 individuals with cash via a pre-paid card. This study provides insight into challenges encountered by implementers of cash programmes in Greece, and the potential protection issues faced with the changing climate of the cash programme in Greece.

Methods:

A literature review of academic and grey literature and semi-structured key informant interviews with stakeholders including Non-Governmental Organisation and United Nations agency staff were performed. Key informants were identified through purposive sampling. An inductive thematic approach was taken in analysis.

Results:

Main emerging themes included the benefits and challenges of CTPs and their role in protection. Challenges included the mobile, heterogenous population and benefits included economic development in Greece and restored choice to beneficiaries. With regards to protection, informants reported a positive impact through allowing refugees to meet their basic needs and prioritise other needs and CTPs providing consistent access to refugees which could allow identification of protection risks. However, protection was not considered in the design of all CTPs.

Conclusions:

Due to the multi-sectoral nature of the response, there is no standard integration of protection into cash programmes. Cash programming offers unique, regular contact with beneficiaries and chances to identify protection risks that are not always utilised due to minimal staff training in protection. Cash assistance in Greece allows people to meet their basic needs and gives people space and funds to prioritise other needs such as health and education, inherently improving their protection status.

Key messages:

- With cash assistance growing in popularity in humanitarian programming, consideration of protection is important as it can improve the health, safety and dignity of beneficiaries.
- In Greece the cash programme was only designed to meet basic needs but broader effects on protection were seen.

Living conditions, diet and lifestyle of Asian and African undocumented immigrants in Athens, Greece

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Aim:

To study the living conditions, diet and lifestyle of undocumented migrants of Asian and African origin living in Athens, Greece.

Methods:

An exploratory study involving a snowball sample of 200 participants who completed a questionnaire survey administered by hand at a non-governmental day-care facility for homeless immigrants in Central Athens. Response rate 60 % (120 / 200 surveys returned).

Results:

Participants were mainly male (96%), aged 20-40 years (84%) and unmarried (61%) with secondary school education (33%). Participants were from different countries of South Asia (81.7%), Middle East (5%) and Africa (11.5%). 26 % of participants arrived in Greece in the last 12 months and travelled on average for 52 days (median 30 days) from their home countries to Greece. The majority of participants (69%) were without a White Card (formerly the Pink Card) for asylum applicants. Their living conditions included homeless / on streets (13%) and living in a shared house (82%) or basement (13%). Participants had access to a kitchen (77%), toilet (77%), water (76%), electricity (78%), heating (53%), refrigerator (76%), TV (68%), computer (43%) and car (7%). Dietary intake and habits revealed that 86% of participants had normal to very good appetite, 52% ate two meals a day and 38% ate breakfast daily but 35% (n = 42) did not eat any breakfast the whole week. The diet included chicken meat (83%), red meat (63%), eggs (60%), white bread (79%), wholemeal bread (33%), rice or noodles (79%), potatoes (74%), vegetables (77%), fresh fruit (66%), dry fruits and pulses (50%) and dairy products (65%). Lifestyle wise, 59% of participants were non-smokers, 13% took recreational drugs and 77% did not allocate any time for daily exercise.

Conclusions:

Undocumented migrants from Asian and African countries take perilous journeys to Europe for a better life but they have very poor social and economic status, which negates the main reasons of leaving their home countries.

Key messages:

- Undocumented migrants from Asian and African countries take perilous journeys for a better life in Europe.
- Undocumented migrants have a very poor social and economic status in Greece.

Perceptions of primary care providers on TB care for migrants: a mixed methods study in Portugal

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Background:

Tuberculosis (TB) is one of the main causes of death worldwide. In 2017, the proportion of TB cases among foreign-born individuals in Portugal was of 19%, and this proportion has been increasing. TB control among migrant populations largely depends on the role of the healthcare providers and their close contact with the patients. We aimed to explore the perspectives of primary care providers on the provision of TB care for migrant patients in Portugal.

Methods:

An online survey and semi-structured interviews were conducted with healthcare providers from primary care settings in Portugal. Overall, 120 participated in the survey, and 17 were interviewed. Data from the survey and interviews were analysed using descriptive statistics and thematic analysis, respectively.

Results:

Many participants (36.9%) considered that migrants arrive at an advanced stage of TB disease, and the main reason referred was migrants' unawareness of the disease and its symptoms. Moreover, half (50.0%) of the providers considered that migrants frequently interrupt treatment, mainly due to their mobility, which causes difficulties in follow-up, and their social isolation that hampers social support. Overall, three main barriers for migrants' access and use of TB care were mentioned: migrants' low socioeconomic status, great bureaucracy required to register at services, and obstacles to benefit from social protection. Providers also suggested more training to improve their cultural competence and updating training on TB care.

Conclusions:

Our study have shown social and economic factors that must be addressed to improve migrants' access and use of TB care. In addition, increased health literacy for migrants and more training initiatives for providers can also contribute to improve TB care for migrants.

Key messages:

- Perspectives from primary care providers in Portugal highlighted social, economic, and administrative obstacles hampering the provision of TB care for migrants.
- With this work we expected to contribute with evidence to improve TB care for migrant patients in Portugal.

Illness behaviour and health needs in migrants characterised by low satisfaction with healthcare

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Background:

Previous research shows inequalities in access to and quality of health care for migrants. We aimed to explore in what way individuals with a migrant background, who report different levels of satisfaction with healthcare, differ in terms of illness behaviour, health needs and sociodemographic characteristics.

Methods:

In the rural Southwest of Germany, we conducted a survey with individuals who have a Turkish (n = 217) or Russian (n = 101) background and whom we could contact via cultural centres. Data were analysed using SPSS.

Results:

In the total sample, 47,5% (Turks 53%, Russians 37%) reported always being satisfied with healthcare, 46,9% were sometimes and 5,7% never satisfied. Turks who were not always satisfied with healthcare significantly more often did not have a regular GP, and rarely visited GPs and consultants. They more often reported the need for culture sensitive print material, assistance in applying for ambulant care and culture sensitive treatment in matters such as intimacy and death and dying. Also, they more often demanded accessibility to healthcare providers with the same cultural background compared to Turks who reported more satisfaction with healthcare. Among Russians, not always being satisfied with healthcare was associated with demanding culture sensitive information on ambulant nursing care and demanding more cultural competence in providers regarding the treatment of particular diseases. Gender was not related to satisfaction with healthcare in either group.

Conclusions:

In this sample of migrants from a rural area culture sensitive treatment was reported to be lacking especially in ambulant nursing care and end of life treatment. In view of the increasing heterogenization of society, it is necessary to address the socio-cultural needs of migrants in a home as well as in a hospital context. Therefore, culture-sensitive materials and workshops for health professionals may be useful to complement their own expertise.

Key messages:

- A low level of satisfaction with healthcare may be related to low levels of utilization.
- In this underserved rural area concerns regarding culture sensitive care need to be addressed.

Asylum seekers' healthcare in Italy: policies and practices among different regions

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Background:

The Italian law provides for international protection and universal health-care coverage for asylum seekers (AS). Indeed, they are entitled to be regularly registered at the National Healthcare Service. Before submitting the application for refugee status, medical assistance to migrants is up to local administration. Our aim was to describe and compare policies and protocols regulating AS healthcare from their arrival to their application for refugee status, at national and regional level. Moreover, we investigated the daily healthcare practice addressing potential gaps between policies and practice.

Methods:

The research team is a subgroup of the Inequality working group of the Italian hygiene society and it is composed of public health residents. The research involved also local health workers and other professionals belonging to regional groups of Italian migrant medicine society (SIMM). We collected national, regional and local policies and protocols and we compared them using a specific framework. Furthermore, we achieved a mapping of daily practice implementation at local health organization (LHO) level using a checklist.

Results:

The most relevant findings were that regional policies themselves vary notably from each other and, as regard practices, LHO implement differently the same regional legislation. Furthermore, we found some critical issues: the delayed inclusion in primary care assistance and lack of continuity of care and of a computerized system of recording information.

Conclusions:

The lack of uniformity concerning policies and practices of AS healthcare might also result in unawareness and uncertainty about how to access to healthcare services by migrants. An enhanced cooperation between groups dealing with migrants' issues may lead to avoid variability at the implementation. Finally, a computerized system for data collection might facilitate the continuity of care and the assessment of the real health needs of the AS population.

Key messages:

- It is a priority challenge for health systems to strengthen the interventions aimed at overcoming the linguistic, economic, cultural and administrative barriers to the health services access.
- It is crucial to improve the recording information system to detect the real health needs of AS, their change and the inequalities in access and to improve collaboration between groups and university.

Self-help as a relief strategy for Turkish family caregiver of people with dementia? A Scoping Review

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Background:

The number of dementia patients with a migration background is rising in the process of demographic change in Germany. For people with a migration background, care is usually provided at home and is accompanied by an increased burden on relatives. Alleviating support services are rarely used.

Methods:

The scoping review on burden and self-help as a relief strategy for Turkish family caregiver of people with dementia includes the databases PubMed, Livivo, CINAHL and Web of Science and is completed by a 'by hand' analysis in Google and Google Scholar. A total of 24 publications were included in the analysis.

Results:

Family caregiver of Turkish origin show a high degree of willingness to assume responsibility for care, show knowledge deficits with regard to support services and are exposed to heterogeneous burdens. People with a migration background hardly make use of self-help. Self-help as a relief strategy could be strengthened by needs-oriented and culturally diverse services.

Conclusions:

There is a need for action to improve domestic care for people with a migrant background. This requires the involvement of stakeholders such as those in need of care, caring relatives and professional carers. Self-help for people with a migration background can be activated and promoted with target group-oriented approaches. The support measures should be designed to be sensitive to diversity and correspond to the heterogeneity of the users and their life situations.

Key messages:

- Self-help for migrants must be flexible and user-oriented.
- Diversity-sensitivity in self-help could address people who are difficult to reach.

DC Digital health

Digital marketing in healthcare

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We live in a digital world when people rely more on smart devices and dedicate their time to searching information online. According to some research, 85% of users now compare and check reviews of products or services prior to their selection, and Google states that as many as 77% of patients search the Internet before they are make decision. That is why more and more health organizations recognize the need for online presence and the use of digital channels to attract new clients. The age group of 15-35 which trusts social media and easier forms of communication when it comes to important decisions. This gives healthcare professionals a platform to engage with such an interactive audience easily.

Benefits - Health organization can either easily promote a product or service to the target group, as it is possible to determine who you want to target for preventive campaigns and services. In the digital world, you can easily measure and optimize results and gain accurate data as much as the range of activities.

Reach, Engagement, CPC? Reach shows how many users have seen the posting, and what is higher, it is spreading more widely. Engagement is the interaction you achieve with your target group. How can you determine that you have paid off and that you have achieved your goal? One of the real indicators of many parameters is certainly the CPC (Cost per Click). In digital marketing, CPC is an advertising payment model according to which an advertiser pays each time a user clicks on a link.

Conclusions:

The Healthcare industry remains behind other industries in the scope of digital marketing efforts. In 2017, only 50% of the survey respondents reported using a CRM system, while significantly more (65%) report using a CRM in 2018. Use of a marketing tool has doubled from last year’s survey, from 23% to 48%. Advanced or emerging digital activities, such as wearables or beacon technology, are still not being used much by healthcare organizations.

Key messages:

- Social networks empowers health clients.
- Majority people between the age group 18-24 (90%) trust information shared on social media.

Patient information ownership in the age of digital health and big data

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Background:

In the context of digital health and the increasing capabilities to derive, store and use information, Big data, and data analytics provide an exceptional perspective towards the evolution of medicine and public health. We collect patient data at unimaginable scale thanks to technological improvements such as wearables, sensors, smart and mobile devices. We are digitizing health on our way to improve cares. The other side of the coin reveals specific issues: it is all about personal information. The risks we face in regard to privacy, autonomy and ultimately justice are worth debating.

Aim:

To consider whether ownership of patient data in the context of digital health and Big data is a good way to guarantee both privacy and the social interest in the field of public health.

Methods:

Historical, documental, ethical research.

Results:

The abilities to collect and store zettabytes of health-related information is spectacular, but learning how to structure and optimize the use of this information is pivotal for the future of public health. People are sensitive in terms of ‘‘ownership’’, rights and privacy, although the idea for actual ownership of health information is not quite popular. Given the fact, that it is personal data, a lot of concerns are related to ensuring privacy. One way to do it is by recognizing patient ownership over their data. The major issue with this, is that it might limit, or even prevent public interest, and so the public benefits. Having in mind the huge commercial interest in health data, that concern looks relevant. When applied in healthcare Big data has the potential to provide important data analytics, which means that we can move to next step in healthcare development - improving disease prevention and health promotion, which are vastly ignored in favor of clinical care. In this specific environment, it is highly questionable whether patient̓s ownership would bring more benefit, than harms in the shared goal of improving healthcare.

Key messages:

- What people might do if their health data is their property, might reflect in a bad way the common goal to structure and use it for health improving.
- Patient data ownership might not be reasonable in the long run, even though from an ethical standpoint and with regard to patient̓s autonomy looks fair.

Infographic as a form of communication in public health

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Background:

Infographics are a communication tool used in the digital environment that can present information, data or knowledge in an easy and understandable way to a wider audience. The aim of this study was to analyze if, and in which areas of public health, infographics are used as a form of communication in Croatia in relation to the world.

Methods:

The research analyses available infographics of leading institutions in public health in relation to Croatia and the world.

Results:

Visualization of key information is an accustomed concept in public health with infographics being a recognizable form of communication and an important part of digital health. However, only a small number of infographics in public health in Croatia are used. Infographics published in Croatia were mainly about exercise, cancer, ageing and stress. In the European Union, the topics found were aging, risk assessment, harassment/violence in the workplace and work-related stress. Infographics from the world addressed child labour, youth employment, gender equality, better work, dialogue promotion, migrant workforce, migration, domestic workers and safety at work. Moreover, International Labour Organisation made interactive media containing infographics - infostories - with topics: young workers, gender gap, migrants, non-standard employment, disability inclusion, forced labour and collective bargaining.

Conclusions:

We suggest to include more public health topics and to raise awareness among Croatian public health experts on the importance of infographics as a form of communication.

Key messages:

- Visualization of key statistical data in the style of infographics enables public health professionals to educate their employees and the public.
- Infographics are excellent tools for communicating important topics and are more likely to drive action and change behavior.

The meaningfulness of open data in Public Health and Healthcare

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Background:

The growing challenges and opportunities of Big Data for Public Health have revealed the potential to improve the efficiency and cost-effectiveness of public policy, for example through better targeting of resources with regard to General Practice (GP) prescribing. Open data has an important role due to its easy access and potential to complement proprietary data sources from, e.g., regional hospitals, and also itself be complemented with social data acquired by specialized approaches.

Methods:

MIDAS pipeline of open source tools aiming integrating, analysing and visualising Open Data enabling health professionals and decision-makers to: (i) improve the usability of open data in combination with proprietary data through combining multiple visualisation tools in an integrated dashboard (ii) to explore the meaning of data in a global/local context based on new information using tone analysis and natural language techniques; and (iii) to have better informed decision-making based on evidence from trusted knowledge-bases. Specific data sources used have included information extracted from the biomedical database MEDLINE, worldwide news and government open data. Social media sources have also been used to gather information from the general public.

Results:

Results include a strong correlation between antidepressant prescribing and economic deprivation, and a wide variation in how individual GP practices respond to demographic conditions. Automated anomaly detection based on the Local Outlier Probability has also been shown to be an easily understood and controllable approach to identifying prescribing outliers.

Conclusions:

MIDAS demonstrates the significant value of open data from heterogeneous sources as basis decision-making in public health and healthcare, particularly when it is combined with proprietary or closed datasets. A key challenge in this regard is the ability to integrate and utilize data from diverse sources in a variety of formats and standards.

Key messages:

- MIDAS is exemplar on tackling the need for improved standards of open data, and new software architectures, tools and platforms addressing a complex ecosystem of heterogenous data sources and formats.
- MIDAS demonstrates the significant value of open data from heterogeneous sources as basis decision-making in public health and healthcare, particularly when combined with proprietary datasets.

Use of social media in public and private hospitals in Italy: preliminary results

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Background:

In 2010, the Italian Ministry of Health set out recommendations for the use of Web 2.0, inviting organizations within the Italian National Health Service (INHS) to implement these tools. In 2014, a study carried out by the National Institute of Health showed a low presence of Local Health Authorities and Italian public hospitals on social media. Considering the constant increase of the use of social media in the population, the aim of the study is to understand if and how healthcare context is moving towards this direction.

Methods:

The list of all public and private hospitals in Italy were retrieved by the official website of INHS. The websites of all the hospitals (n = 1054) will be visited to look for the presence of social media. Engagement level and use of social media will be evaluated.

Results:

A preliminary analysis focused one 97 hospitals, of which 64 public and 33 private. Social media are present in 38 (39%) of them, particularly Facebook, Twitter and You Tube (92%). Only Twitter or YouTube are present in three hospitals. Social media are present more in hospitals in the North of Italy (58%) compared to Center (29%) and South (13%) ($p = 0.002$). Furthermore social media are present more in private hospitals than public (55% vs 44%, $p < 0.001$).

Conclusions:

Preliminary results show a low presence of hospitals on social media, with some differences between geographical areas and type of hospitals. Adherence to Ministry of Health's recommendations seems still low.

Key messages:

- Public health communication need to implement new strategies to increase public participation and provide reliable information using the information channels most used by the population.
- Considering the spread of health information through social media, an active presence of healthcare organizations on these channels could be an opportunity to engage people in health interventions.

Connecting Older Adults and Their Families through Social Technology

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Background:

Older adults often face problems with social isolation, which is a risk factor for poorer mental and physical health. New forms of social technologies (e.g., WhatsApp) provide opportunities to facilitate social connectedness with family members. Understanding older adults' behaviors and perceptions related to digital communication tools can inform the development of interventions to increase the adoption of these tools for social communication. This study aims to evaluate attitudes and barriers to as well as facilitators of social technology reported by grandparents and grandchildren. The secondary aim is to examine the associations between social technology use and health and well-being outcomes and to identify what factors mediate the use of social technology.

Methods:

In this cross-sectional study, 144 grandchildren (Mage = 26.53, SD = 9.17; 81.9% female) were recruited through student mailing lists. Grandparents were invited either through their grandchild or by the research team and recruitment is expected to be completed by September 2019. Three main groups of variables were examined: health and well-being outcomes, social support related outcomes and social technology related outcomes.

Results & Conclusions:

Grandchildren reported very positive attitudes toward social technology as expected. Greater social technology use was associated with better psychological ($r = .26$, $p = .002$) and subjective well-being ($r_s = .20$, $p = .023$), higher psychosocial flourishing ($r = .41$, $p < .001$), social support ($r_s = .22$, $p = .009$) and social connectedness ($r = .39$, $p < .001$). Social technology use was not correlated with health, the grandparent-grandchild relationship, loneliness and depression at the bivariate level. Barriers to social technology are security concerns, threat to privacy and constant availability. Facilitators include increased contact, dealing with geographic boundaries and information seeking. Results from grandparents will also be presented.

Key messages:

- Social technology has potential to enhance older adults' lives by facilitating better family relationships, building social support, reducing loneliness and through this improve health and well-being.
- More research is needed in this area to understand benefits or potential harms and dynamics between younger family members and older adults in use of social technology.

StopBlues: a French e-health device to prevent suicide in the general population

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Background:

France is one of the Western European countries most affected by suicide, an epidemiological burden and high societal cost of several million euros/year. Several European projects have either implemented web-based interventions for care of mental disorders or recommended online actions which have demonstrated their effectiveness for suicide prevention.

The objective of the project was the construction of an application and website to prevent suicide in the general population, with its promotion being supported at the local authority level.

Methods:

The detailed content of the devices and promotional tools available to local authorities was determined through literature reviews and expert groups (psychiatrists, local authorities' workers and potential users).

Results:

An application and website were constructed with two parts: a public interface with videos (psychological suffering, coping strategies and help available), an emergency button, a map with local resources and contact information (psychiatrists, psychologists, associations...), tips and videos to overcome a period of psychological suffering; and a private interface requiring registration giving access to self-assessment questionnaires and a safety plan to fill in case of crisis. 40 local authorities are involved in StopBlues promotion, with a referent each, responsible of contact with our team, and local organization of promotion.

Conclusions:

Since 04-2018, StopBlues is available at www.stopblues.fr and can be downloaded on iOs and Android. Its promotion is part of a cluster randomized trial with 3 arms: a control group with no promotion, a group with promotion by local authorities, and a group with promotion by local authorities and general practitioner's waiting room. As promotion could have different intensities depending on budgets and referent's involvement, we decided to extend it for another year, with local authorities of group control receiving additional financial and organizational support.

Key messages:

- As the first e-health program for suicide primary prevention in the French general population, StopBlues' main goal is to help people find solutions that suit them and direct them to the right help.
- Local authorities are a key level to promote primary health prevention programs.

Role of Social Media in vaccination debate about HPV: the VAC Medi+Board study

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Background:

Whilst it has long been known that anti-vaccination sentiment is widely disseminated through digital networks, 2019 has seen seismic shifts in the landscape. As viral videos originating on Youtube spread across social networks, HPV vaccine uptake tumbled in a number of countries. In Japan, the government came under sufficient pressure that they de-recommended HPV vaccine, seeing a 70% uptake rate in 2013 fall below 1%. However, there have been some reports of successful interventions - a recent campaign run by the HPV Alliance in Ireland has seen a rate back up to a national average of around 75%. A combination of hard-hitting personal testimonials, social media and traditional media looked to promote the HPV vaccine.

Methods:

Social media platforms such as Twitter enable near real-time understandings of vaccine sentiment and information flows at scale. VAC Medi+Board project developed an innovative approach for Twitter data collection, integration, analysis and visualisation to support rapid responses through identifying key influencers and flashpoints in articles about vaccination going viral.

Results:

This pilot study evaluated the debate about HPV on Twitter in a period of several month and developed methods for analysis and visualisation of the content, key influencers, information diffusion throughout the network and size of audience. Through complex network analysis, VAC Medi+Board piloted identification of individuals for targeted public health interventions to combat misinformation.

Conclusions:

In this talk, we will present the VAC Medi+Board HPV study and explore the challenges and opportunities that social media can provide for public health policymakers.

Key messages:

- Analysis and graphical visualisation of HPV debate on Twitter to support targeted public health interventions at real-time.
- Contributing to better understanding the role of social media in the complex picture of vaccines hesitancy.

ZIKA: improved surveillance and forecast of Zika virus in Brazil

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Background:

The devastating consequences in neonates infected with Zika virus make controlling the spread of the virus and its vectors (Aedes mosquitoes) an urgent challenge. Mobile technology has been successfully used to support routine surveillance of mosquito populations conducted by the community health workers (health agents). Mobile real-time surveillance data also provides a ground truth for calibrating early-warning and prediction systems.

Methods:

The ZIKA app supports the health agents in routine surveillance of properties with risk of mosquito breeding, recommends the most optimal route to visit the assigned properties, and includes gamification features, such as badges, to reward healthcare agents for successfully completing the surveillance tasks. Secondly, the project developed a model of the vector population spread using neural networks and artificial intelligence methods combing data from healthcare agents and mosquito ovitraps from the period 2009-2014, with climatic and weather data, calibrated by the real time data from the ZIKA app.

Results:

The results from testing sessions demonstrated the app could replace the very time consuming paper-based systems and provide an improved surveillance data available at real time, for seamless reporting to the regional authorities. Using the 2009-2014 dataset, the neural network model successfully predicts mosquito occurrence in the high risk regions of the city of Recife.

Conclusions:

The ZIKA mobile app provides a much improved surveillance of the mosquito populations and real-time data for the public health authorities responsible for rapid response. The AI early warning model successfully predicts mosquito populations using healthcare agents data, weather and climatic data.

Key messages:

- ZIKA project developed a mobile app to improve surveillance of mosquito population in tropical regions of Brazil.
- ZIKA early warning system, using AI neural networks, has the potential to predict the risk of mosquito populations in high risk urban locations.

The use of E-sexual health as a way of lowering help-seeking barriers for sexual dysfunctions

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Background:

The prevalence of sexual dysfunctions is not negligible and experiencing a sexual problem is often accompanied by psychosocial effects, increasing the risk of comorbidities such as depression, greater levels of anxiety and lower self-esteem. Less than half of the individuals who experience sexual problems seek professional help, partially because of stigma and ignorance. Therefore a solution is required. E-sexual health has potential to help individuals with sexual dysfunctions, but little is known about its' use.

Methods:

We examined the predictors of E-sexual health usage using the Technology Acceptance Model (TAM). Perceived usefulness, ease of use, attitude, and intention to use E-sexual health were explored as potential predictors in a cross-sectional survey (N = 426). 413 of them were female, 180 male, aged from 18 to 72 years (M = 24.5, sd = 7.8). Structural equation modeling (SEM) was used to test the model.

Results:

The results showed that TAM can effectively predict whether patients adopt E-sexual health. The model demonstrated a good fit ($\chi 2$ = 1197.73, df = 500, $\chi 2$/df = 2.40 TLI = .913, CFI = .927, IFI = .927, RMSEA = .048). Notwithstanding, it appeared that the current use and implementation of E-sexual health is much lower compared to several other E-health services.

Conclusions:

It should be taken into account by healthcare providers that people are hesitant to disclose sexual problems. Further research is necessary to find out how to increase awareness of the relevance of treating sexual problems and how to increase knowledge about the possibilities of E-sexual health and its' usefulness.

Key messages:

- E-sexual health has the potential to reach more patients with sexual dysfunctions.
- Increasing awareness for the relevance of treating sexual dysfunctions, and the potential of E-sexual health can lower the barriers for help-seeking behavior.

Healthcare digital services in Italy: good practices across Regions

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Background:

In Europe, digital transformation of healthcare is one of the agenda priorities. Institutional websites and mobile applications (APPs) have been increasingly adopted by healthcare organizations for communication and service delivery. This study aims at describing the state of art and the variability of healthcare digitalization in Italy.

Methods:

The study focuses on 144 active websites of public healthcare organizations (i.e. Local Health Authorities and Teaching Hospitals) of 11 out of the 21 Regional healthcare systems in Italy. The research investigates whether the healthcare organizations provide e-booking and e-paying for outpatient visits through their website/APP and whether citizens are informed of this opportunity. Researchers independently analyze the websites taking the user's perspective, by adopting a common grid. Data refers to December 2018.

Results:

The majority of items analyzed show a high variability within and among Regions. The provision of online services patients can benefit of change across the same territory. Almost 76% of the LHAs/hospitals allow for e-booking of outpatient visits and e-paying is available for 84% of them. The adoption of APPs for healthcare is not homogenous. Some Regions develop a specific regional tool (e.g. Apulia, Lombardy) providing uniform access to digital services to their resident population while in other Regions, public healthcare providers can implement their own APP (e.g. Liguria, Veneto).

Conclusions:

Our findings suggest that centralizing digital services - at least at regional level - can enhance healthcare digitalization in Italy, avoiding jeopardized and unequal provision of digital services. Further research should investigate the actual use of these services by citizens and the reasons of variability.

Key messages:

- Italy is in delay in digital transformation of healthcare.
- Our study supports the identification of good regional practices, which could endorse the implementation of future actions.

Understanding non-compliance with surgical antibiotic prophylaxis prescribing guidance, in Nigeria

Caroline Wood

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Background:

Antimicrobial Resistance is a prominent worldwide threat that is increasing in low-to-middle income countries. Good antibiotic stewardship (AMS) improves compliance with evidence-based antimicrobial prescribing guidelines but just 4% of LMICs have national AMS initiatives in place and only 15% have national policies. As high as 20-50% of surgical antibiotic prophylaxis prescription in Nigeria is thought to be non-compliant. Behaviour change theories can structure our understanding of why poor compliance occurs and can facilitate development of effective interventions to improve it.

Methods:

The Theoretical Domains Framework (TDF; Michie et al. 2009) was used to develop an online survey and interview schedule for focus group discussions. Audio recordings were transcribed and analysed by two researchers using thematic analysis, TDF and the COM-B model of behaviour change (Michie et al. 2010).

Results:

60 surgeons (59% male; 43% surgical consultant; 5-10 yrs experience) from Lagos University Teaching Hospital, Lagos University College of Medicine and Niger Delta University Teaching Hospital completed the survey. A sub-group of 14 surgeons (79% male; 86% surgical consultant; 10-15 yrs experience) participated in three focus groups. Whilst compliance with guidance was generally considered desirable, surgeons reported translating guidance to Nigerian practice and context was often difficult, time-consuming and restricted by not having access to recommended antibiotics.

Conclusions:

Behaviour change theory can be used to further our understanding of key barriers and facilitators to non-compliance with surgical antibiotic prophylaxis prescribing guidance, amongst surgeons in Nigeria. This presentation will conclude with discussion of how findings from this project are being used to develop a cost-effective, scalable, decision-support smartphone app for prescribing behaviour change.

Key messages:

- Behaviour change theory can be used effectively to further understanding of barriers and facilitators to Nigerian surgeons' non-compliance with surgical antibiotic prophylaxis prescribing guidance.
- We must form a comprehensive understanding of factors (social & environmental) driving non-compliant attitudes and behaviours, before creating interventions to change prescribing behaviour.

eHealth Literacy and Fertility – managing complex information in a digital environment

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Background:

There is increasing reliance on the internet as a source of health information including for those seeking information about fertility. This study investigates how people access, understand and process online fertility information and engage with digital services.

Methods:

Purposive sampling was used to recruit 27 participants from a range of groups including those diagnosed with infertility, those who successfully conceived after a period of infertility, same sex couples, those over 40 and younger people making decisions about delaying parenthood. Semi structured telephone interviews explored information seeking behaviour and ehealth literacy competencies. Data were analysed using thematic analysis.

Results:

Digital platforms were identified as a primary source of information but presented barriers including gaps in content, and concerns about relevancy and complexity. Source credibility was a priority alongside a recognition that emotional drivers led to the active seeking of specific information. Participants described a journey from general information to specific, detailed and tailored content. Participants moved between conversational forums on social media sites and information based internet platforms as part of an ongoing process of identifying and understanding information. However, participants were typically purveyors of information in their real world relationships. Information was used to prepare for and understand interactions with health professionals.

Conclusions:

Sources of digital information need to respond to the ehealth literacy competencies of users. Users go beyond the passive accessing of information through digital platforms and are actively engaged as contributors of information through social media and app based technology. The value placed on other people in accessing and understanding fertility information, through online forums and virtual communities, shows the importance and complexity of distributed health literacy.

Key messages:

- Digital platforms are a key source of information around fertility.
- Interaction with digital platforms is complex and requires the digital environment to respond to their ehealth literacy needs.

Artificial Intelligence-based tools to control healthcare associated infections: where do we stand

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Background:

Control of Healthcare associated infections (HAI) is a key public health concern in Europe. Current HAI surveillance systems are based on manual medical records review, vulnerable to misclassification and expensive. Artificial intelligence (AI) offers great potential to public health action and, specifically, to HAI control. Still, scant evidence is available on both its practice and impact.

Methods:

As part of a broader multidisciplinary project, we conducted a systematic review to retrieve, pool and critically apprize all the available evidence on practice, performance and impact of AI-based HAI control programmes. We followed PRISMA guidelines and searched the Medline and Embase databases for relevant studies. Included studies were stratified by HAI type and outcomes of interest, including all possible performance measures, clinical, organizational and economic outcomes.

Results:

We screened 2873 records, resulting in 27 papers included in the review. Studies were carried out in 9 countries, the majority in the US (56%), 18.5% in EU countries, 25.9% published in 2018. Two thirds of studies focused on selected types of infections. Study designs were very diverse and performance observed for HAI detection were very heterogeneous, precluding pooled calculation of summary diagnostic accuracy estimates in most instances, but generally higher than non AI-based models. The highest performance outcomes were Specificity and Negative Predictive Value. Overall performance measures of AI algorithms were: sensitivity range 19%-92%, specificity range 64%-96%, accuracy 70.2%-96.1%.

Conclusions:

Use of AI algorithms for HAI surveillance of HAI has increased reliability compared to traditional surveillance or to automated surveillance models. With ongoing improvements in information technology, implementation of AI models will improve the quality and capacity of surveillance will support hospital HAI surveillance.

Key messages:

- Artificial Intelligence (AI) offer great potential to healthcare associated infections (HAI) control.
- Preliminary evidence show AI-based models have perform better than manual or automated models for HAIs detection.

Addressing equity in eHealth interventions for healthcare system users & patients, literature review

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Objective:

eHealth has great potential to improve access to health information and care but important barriers to equity still exist and a real digital divide threatens its use. It is therefore necessary to build a conceptual framework on digital health interventions aiming at promoting equity and to analyse the strategies and recommendations that arise through the literature. Such a conceptual framework has not been identified in the literature yet.

Methods:

We carried out a scoping literature review of the scientific literature since 2000 in Western countries, in Scopus, PubMed, PsycArticles, SocIndex and PBSC.

Results:

Strategies that take into account equity in eHealth for healthcare system users and patients can be presented in light of the five key action areas of the Ottawa Charter for Health Promotion. They deal with the policy level, the individual one, aim at creating supportive environments, at using the community level for eHealth promotion and focus on health services. Individuals-oriented interventions are the most reported, thus revealing a lack of systematic thinking and certainly a lack of understanding of the whole spectrum of health determinants.

Conclusions:

Following Gibbons' expression of "compunetics" (Information and Communication Technologies & ethics), interventions that truly consider the unintended consequences of eHealth on social and geographic health inequalities are absolutely necessary. The conceptual model analysing the whole literature on this interaction makes it easy to understand the types of interventions that are or could be carried out to tackle equity issues in digital health interventions. Its recommendations become easy to implement in the field and can be extremely helpful for decision-making.

Key messages:

- Strategies that take into account equity in eHealth for healthcare system users and patients can be presented in light of the five key action areas of the Ottawa Charter for Health Promotion.
- The conceptual model we elaborated makes it easy to understand the types of interventions that could be carried out to tackle equity issues in digital health interventions.

Identifying latent needs in elderly digital literacy: the PROADAS study

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Background:

According to the Digital Agenda for Europe (2014 - 2020) enhancing digital literacy, skills and inclusion is one of the main priorities. All European elderly people must become e-seniors as soon as possible. On the hand, active ageing means that senior citizens activate themselves in order to be as independent as possible. As a result, triggering these new digital tools and ICT skills can assist the elderly to be a more integrated part of our society. The Erasmus+ Proadas project promotion of Active Digital Ageing Skills aims at tackling the gap between ageing population and digital literacy and strengthening and reinforcing the stakeholders, experts and practitioners, by identifying the needs of elderly people and their carers regarding technology.

Methods:

The study was conducted in January 2019 in all six countries participating in the Proadas project. 35 carers and their assigned seniors were selected via convenience sampling by a minimum of three best practices- centres of excellence per country. A twelve-question close format questionnaire was developed, using a Delphi approach and completed by all participants. All data was analysed using SPPS 20.

Results:

A total of 188 responders from all six countries agreed to participate response rate 89.5% of which 51.5% women. Age varied significantly between 20-75 years. Regarding existing ICT skills participants in all countries were familiar with basic use of computer and internet but very few used advance services. There was unanimous agreement that learning is facilitatedwith the help of family or friends. A combination of traditional and digital learning format was deemed most appropriate. The main obstacles involved lack of trainers, motivation and suitable educators.

Conclusions:

There is latent need for the integration of ICT in elderly care. The development of suitable learning material and the involvement of motivated carers are key strategies for the successful implementation of such a reform.

Key messages:

- ICT is insufficiently used for elderly health education.
- Digital health can be beneficial for the elderly and their carers.

Social capital and social networks

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Introduction:

Social capital can be defined as the 'sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of networks or less institutionalized relationships of mutual acquaintance and recognition'. Nowadays there are a number of new way to have social relationship. Developing community and individual social capital is an important aspect for health promotion in order to decrease social isolation and health inequalities.

Methods:

This research aims to detect to what extend online social networks can help in building social capital and decrease social isolation. An analysis of the content of an open Facebook group of people who are experiencing chronic diseases was carried out (7912 individuals).

Results:

Text mining analysis was carried out, as well as a content analysis in order to identify which kind of social support and social capital emerged among participants. Results based on text mining (234.943 words) and thematic analysis (information, relationship, support) show that even virtual social group have an important impact on participants' wellbeing and health. Participants seems to develop through participation all construct of social capital i.e. bonding, bridging and linking social capital. There is an overall increase in confidence and sense of community. However, virtual communication seems lacking of a number of crucial aspect of human interaction such as face to face communication or physical contact.

Conclusions:

The use of social network as a new place of aggregation and socialization is an important aspect to look at. Virtual networks can have a role in developing relationship and to build trustiness on individuals. Public Health and Health Promotion, as well as health care professionals should be aware and concern about social capital as a key aspect of health and explore in depth the role of new social networks as a new way to build social capital and health of individuals and communities.

Key messages:

- Text mining as new useful tools for health research.
- Social capital and social network intersection.

DD European and global health

Promoting healthy sustainable societies through a circular analytical dialogue method

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Background:

The relationship between journalists and populations is complicated and the subject of ''fake news'' is one of these related issues. Despite the controversy, journalistic media are the ground to a well-informed society and as such journalists have the potential to be important actors in the pursuit of population health. At the same time, frustration against journalistic media has increased globally and vulnerable and so-called 'invisible' groups feel neglected by the media.

Methods:

The Circular Analytical Dialogue is an innovative method for examining the dialogue between journalists and citizens and investigating the role of journalism in promoting social cohesion, population health and democracy.

Results:

The preliminary results of a pilot study in Japan on the topic of migration, using the Circular Analytical Dialogue, show that the dynamic between the participants and the journalists was valued by all parties as it allowed a profound and valuable dialogue. The journalist was most appreciative of the feedback of the participants as it opened alternative perspectives that were not considered beforehand.

Conclusions:

The Circular Analytical Dialogue has the dual ambition to be a research as well as a journalistic tool and the knowledge generated with this method is intended to be used to strengthen understanding about the importance of journalism for healthy democratic societies.

Key messages:

- The Circular Analytical Dialogue method reinforces the importance of academic activism strongly related to sustainable societies.
- The Circular Analytical Dialogue method can potentially contribute to the empowerment of populations fundamental to population health.

Primary care providers' beliefs and practices on colorectal cancer screening in Kuwait

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Background:

Colorectal cancer (CRC) is a major public health issue in the Arab region. In Kuwait, CRC is the second most frequent cancer, with an age-standardized (world) incidence rate of 13.2 cases/100,000 in 2018. Despite the national efforts to promote CRC screening the current participation rate is very low (5 to 17%). Primary Care Providers (PCPs) are considered as the gatekeepers of cancer screening globally. This is one of the first studies in Kuwait that examined the current beliefs/practices of PCPs on CRC screening.

Methods:

This cross-sectional study was conducted at governmental primary care centers in Kuwait from 2015-2017. Of 564 PCPs invited to participate from all centers, 255 completed the self-administered questionnaires. The 14-page survey contained 75 questions on PCPs' beliefs and practices of CRC screening. Data were analyzed by using descriptive statistics.

Results:

The study sample consisted primarily of females (52.0%) and non-Kuwaiti (79%) physicians, with mean age =43.3 (SD: 11.2) years. Most respondents (92%) believed that colonoscopy is the most effective screening tool. The majority (78%) reported that they recommend CRC screening to their patients, with colonoscopy as the most frequent modality (87%) followed by the Faecal Occult Blood Test (FOBT) (52%). Around 40% of the respondents stated that they did not have time to discuss CRC screening with their patients. The majority (72%) believed that their patients did not complete their CRC screening tests. Health system related barriers included difficulties in obtaining test results from the gastroenterologist (61.4%), ordering follow-up test after a positive screening test (50.6%) and shortage of trained staff to conduct the screening test (44.2%).

Conclusions:

A majority of PCPs in Kuwait recommend CRC screening to their patients, but not all patients follow through their recommendation. More research is needed to find out how to further enhance patient uptake of CRC screening.

Key messages:

- Colonoscopy is the most frequent screening CRC modality used in Kuwait.
- Health system related factors can be important future intervention targets to promote CRC screening.

Women political empowerment and child health: an empirical analysis, 1990-2016

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Empowering women has been presented as a key strategy to improve child health. Yet, the literature on the subject is mixed, with strong variations in measures or according to context. Additionally, most of the research focuses on social or economic empowerment at the individual level rather than on structural factors or political empowerment. In this study, we explore whether women political empowerment is associated with improved health for children under 5 years old, in comparison to socio-economic empowerment or structural factors from the sustainable development agenda.

We use the V-Dem project's Women's Political Empowerment Index and its components, combined with selected indicators of child health from the World Bank's World Development Indicators for 166 countries, between 1990 and 2016. We estimate random- and fixed-effects regressions for the index as a whole and its individual components against child mortality, stunting and immunization coverage, controlling for structural and socio-economic indicators.

The association between women political empowerment and child health outcomes tends to weaken once country heterogeneity is accounted for. Looking at individual components of women empowerment, factors or markers of socio-economic empowerment tend to have a stronger positive effect on child health compared to more political ones, for which we found either no correlations or even detrimental links to child health outcomes.

Our results demonstrate the complexity of the relations linking women empowerment and child health. Presenting women political empowerment as a whole as the solution to improved child health appears misguided. However, selected individual freedoms and markers of women socio-economic empowerment are associated with positive effects on specific child health outcomes. This calls for a more context-specific yet multi-dimensional approach to women empowerment and child health in order to provide cohesive evidence to achieve the related SDGs.

Key messages:

- The relations between different dimensions of women empowerment and child health are complex.
- Women socio-economic empowerment may offer better leverages than political empowerment to improve child health.

Is the French Emergency Medical Service System duplicable in developing countries?

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Issue:

The management of pre-hospital emergencies is a growing issue in developing countries, particularly because of the increase of both road accidents and cardio-vascular diseases.

Description of the problem:

Numerous countries have tried or are currently trying to develop emergency response systems like the French SAMU but the outcome of those actions show a lot of difficulties. It is however proved that efficient care of serious pre-hospital medical emergencies significantly improves both patients' mortality and morbidity.

Results:

AP-HP, Greater Paris University Hospitals, has a strong experience of supporting the development of this model of care in countries with limited resources. Most of last 30 years' experiments have been reviewed to understand what the essential prerequisites to succeed in setting up an emergency response system such as SAMU are. The analysis (5 criteria evaluation: efficiency, sustainability, effectiveness, impact, relevance) of past and present experiments in 28 countries showed that main issues are political (what are the priorities?), financial and societal (what does the population expect?). The question of medical resources is also crucial as the French model introduces medical regulation at all levels. Moreover, in France, such a system is built as a health care pathway with a predetermined orientation towards the appropriate and operational structure, which unfortunately is not the case in a lot of countries. Aside from those realized in China or in some Southern American countries, most of the projects so far don't match all the evaluation criteria, particularly sustainability, as it is based both on stable funding and a strong reactivity of local hospitals.

Lessons:

Future projects will have to fit with the local context. Strong commitments from partner countries must be made on the long term to have a real impact.

Key messages:

- There is no universal system easily duplicable.
- Some major prerequisites must be identified and implemented to succeed in the set-up of an efficient and sustainable EMSS.

How aligned are the WHO European Region policy documents to the Sustainable Development Goals?

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Background:

The 2030 Agenda for Sustainable Development presents an unprecedented opportunity to apply an ecological perspective in public health. It's success relays on the capacity to interpret and translate embodied principles into policies and actions. Regional policy document (PDs) guide the actions taken by the World Health Organization (WHO) and the Member States. This study aims to explore the alignment between these tools and the health-related Sustainable Development Goals (SDGs) in the WHO European Region.

Methods:

PDs were identified scanning the contents of the 2015-2018 Sessions of the Regional Committee for Europe - the WHO decision-making body. 17 PDs endorsed during this period were directly included. 39 Progress reports were scanned to find additional valid PDs. The Final list included 32 items. A content analysis of the PDs was used to establish alignment to 64 health-related SDGs targets.

Results:

Preliminary results found that each PD aligned to multiple targets within and beyond SDG 3. 24 PDs addressed all targets of SDG 3. A gap within target 3.b was identified (development of medicines and vaccines). Three PDs dealt with health issues outside SDG 3: target 2.1 and 2.2 (end hunger and malnutrition), 15.8 (prevent and reduce the impact of invasive species), and 16.2 (end violence and abuse against children). Five crosscutting PDs aimed to reduce the impact of social, economic and environmental determinants of health on specific population groups, aligning to several targets at the time. Gaps in Target 8.7 (eradicate forced labor) and 14.2 (protect marine and coastal ecosystems) were found.

Conclusions:

PDs have the potential of contributing to several targets simultaneously, linking health to diverse aspects of sustainable development. The SDGs open the possibility for multisectoral actions. PDs invite decision-makers to venture into unconventional policy fields to address public health concerns raised by climate change and sustainable development.

Key messages:

- Policy documents are a valuable instrument to advance the 2030 Agenda as they enjoy the commitment of Member States and guide the action taken by international and national decision makers.
- The ecological perspective in public health promised by the 2030 Agenda demands actions beyond SDG 3, to address the health dimension of all aspects of sustainable development.

Physical activity and self-perceived health of women in the Province of Vojvodina

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Introduction:

Women suffer from many diseases that are associated with low level of physical activity. The aim of this paper was to estimate the association between physical activity and self- perceived health of women in the Province of Vojvodina.

Methods:

Research was conducted as a cross-sectional study on a sample of 1356 women aged 20-65 years in Vojvodina, as a part of the National Health Survey in Serbia, 2013. Physical activity was analysed through 3 domains of physical activity - as leisure time physical activity, walking and cycling for transportation and physical activity at work. Univariate and binary logistic regression was used to estimate the association of poor self-perceived health as dependent variable with 3 domains of physical activity. Multivariate model were adjusted for age, type of settlement, DHS Wealth Index, education and employment status.

Results:

One of twelve women was physically active in leisure time 150 minutes and more (8.1%), 50.0% of women walked for transportation 150 minutes and more weekly, while 16.5% cycled 150 minutes and more weekly. Women who never walked for transportation had 9.17 time higher chance to self-perceived their health as poor compared to those who are active 150 minutes and more weekly (OR = 9.17; 95%CI 4.16-20.18), while women who are inactive at work had 1.74 higher chance to self-perceived their health as poor compared to working active women (OR = 1.74; 95%CI 1.14-2.66).

Conclusions:

Physical activity at work and in the form of walking for transportation showed as predictors of poor self-perceived health.

Key messages:

- Regular physical activity can improve womens' health and help prevent many of the diseases and conditions that are major causes of death and disability for women around the world.
- Physical activity can contribute to building self-esteem and confidence and can provide a vehicle for social integration and equality for women in society.

High-throughput profiling of health-associated political, economic, commercial and social factors

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Background:

Political, economic, commercial and social factors have considerable impact in shaping health outcomes. Yet, most research is hypothesis-driven and, probably, not fully exploring the available data. We aimed at adapting gene expression profiling methods to perform unsupervised high-throughput profiling analysis of large databases of country indicators associated with life expectancy at birth.

Methods:

We analysed 464 World Bank development indicators for 217 countries using a Limma software R package. We established the differentially represented indicators (DRIs) between countries in the first and third terciles of life expectancy at birth. The analysis was stratified according to high (HIC), middle- (MIC) or low-income (LIC) status. Indicator profiles by development category were compared to determine overlaps and group-specific DRIs. Confounder-adjusted multivariable linear regression models were used to validate chosen DRIs.

Results:

We identified 99 DRIs for HICs, 7 for MICs and 190 for LICs. One DRI was common to all categories - ''particulate emission damage (% of GNI)'' (adjusted p.value = 7.3E-5). This DRI was negatively associated with life expectancy despite adjustment for GDP per capita (GDP), human capital index (HCI) and development classification (Beta = -2.7, $p < 0.001$). We also analysed the 7 identified gender-related DRIs. Only female murder rate (per 100 000 females) was negatively associated with life expectancy, independently of GDP, HCI, GINI index, education parity indexes, overall and male murder rates (Beta = -2.1, p = 0.001). This association was found in HICs (p = 0.001) and MICs (p = 0.03), but not in LICs (p = 0.4).

Conclusions:

Bioinformatics methods could help to analyse large country level datasets, allowing the profiling of DRIs and identify potential new determinants of health or health-associated indicators.

Key messages:

- Using bioinformatics tools can be useful in uncovering health-associated indicators for global health.
- Particulate emission damage or female murder rate could represent potential important determinants of health or health-associated indicators.

A practical guide to make the case for sustainable investment in well-being and health

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Growing health, inequity, economic and environmental challenges threaten the well-being of present and future generations. Current investment policies and practices are unsustainable and result in high human, social, economic and environmental costs. Countries require the tools to build the case for investment in areas of greatest need by applying evidence-informed practice.

A practical guide with tools and resources was developed on how to develop an evidence-informed product to make the case for investment in well-being and health equity.

Stakeholder interviews with national and international experts in health policy, equity, economics and social sciences were conducted to inform the outline of the guide and identify enablers for creating evidence-informed products. An evidence review gathered tools and resources on how to translate and communicate public health evidence into policy and practice. An international cross-sector expert consultation assured relevance and transferability of the guide across countries, contexts and policies.

The guide aims to prevent disinvestment in health and increase investment in prevention as well as mainstream cross-sector investment to target the wider determinants of well-being and health equity. It outlines how to synthesise, translate and communicate public health and health economic evidence into policy and practice and proposes a step-by-step approach following four key phases (i) project scoping and planning, (ii) evidence gathering, synthesis and design, (iii) dissemination and communication, (iv) monitoring and evaluation.

The guide presents information to develop an evidence-informed product to make the case for sustainable investment in an innovative and informative way for use by a range of stakeholders. It accounts for policies and contexts and is communicated in a way that is accessible for decision-makers, easy to use and available as hard copy and interactive version.

Key messages:

- Investing in well-being and health equity drives and enables sustainable development.
- Making the case for investment in health equity requires a well-planned, evidence-informed approach.

Factors associated with activity limitation: are the risk patterns the same across Europe?

Elena Von Der Lippe

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Background:

The Global Activity Limitation Indicator (GALI) is part of the Minimum European Health Module and has been shown to be a valid indicator of functional limitations. The present study aims to identify determinants of GALI prevalence among adults in Europe.

Methods:

We used data from the European Health Interview Survey (EHIS) Wave 2 which included adults aged 15 years and older and was conducted between 2013 and 2015 in all European Union member states. We examined patterns regarding age, sex, education and chronic diseases. After excluding some inconsistencies in the data the sample size was 284,732 respondents from 26 countries.

When making comparisons across countries one has to bear in mind that the data was collected through different modes, the indicators were obtained through various instruments and in some countries interviews were conducted not always with the target person, but with a proxy person.

Results:

Our findings revealed that age and education are very strong determinants of functional limitation in all countries. Sex showed to be mostly non-significantly associated, however in some Eastern and Southern countries it plays a significant role. The additional factors examined showed less consistent picture. While chronic diseases with stronger disease burden were associated with higher limitation, diseases that are well treatable (like high blood pressure) showed in some countries strong associations with functional limitation while in others there was no clear relationship.

Conclusions:

Having in mind the aging of the population, the problem with the functional limitation in higher ages will increase furthermore. This is an issue which should be taken into account in health promotion policies. The role of chronic diseases and their association with disability cannot be neglected. Prevention policies should put more effort in identifying earlier the vulnerable population (e.g. less educated) and promote health care initiatives.

Key messages:

- Age and education are strong determinants of functional limitation across all European countries. Sex showed inconsistent patterns.
- Functional limitation is in general strongly associated with chronic disease. However, differences in Europe were found with regard to some specific conditions.

European Public Health Master program – public health support worldwide

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Background:

In 2006 a joint European public health master course EuroPubHealth was created by a group of European universities, coordinated by the EHESP in Rennes. The EPH Program is co-funded by the Erasmus+ Programme of the European Union.

Objectives:

One of the objective of the EPH Program is to support public health development through education of specialists from different parts of the World. To see the scope of this support, the data of candidates and students were analyzed, mainly in terms of their country of origin and background.

Results:

A total number of candidates is growing significantly: it was 319 in 2006 and 609 in 2018. In 13 intakes over 5100 candidates from 156 countries applied, 331 of them (from 77 countries) became students. Most of candidates were from Africa (42% in total and 10% from Nigeria only) and Asia (33%). Looking at students' group the structure is different - 28% students were from Europe and 25% from Asia; Africa took only 10% study places.

The most frequently occurring backgrounds of candidates and students in years 2013-2018 were medicine (over 20%), public health (about 12%) and biological sciences (10% of candidates and 16% of students), but it varied greatly depending on the origin: e.g. there were only 7% of physicians among candidates from USA, and nearly 30% among Africans and Asians. Nearly 20% students had a background not directly related to medicine and biology, so they formed very diverse groups.

Conclusions:

Over 70% EPH students came from outside Europe, over 180 public health specialists from Asia, Africa and South America were educated. Now, many of them work on public health development in countries with very high needs in this area, supporting local communities.

Key messages:

- The EPH Program helps to develop public health on all continents.
- The interest in education in public health is very big - people interested in education are from very different countries and their background is not always connected directly with human health.

From deliberative dialogue to impact: envisioning kmowledge translation

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Background:

The previous decades of research have contributed tremendously to the improvement of health. Nonetheless, problems remain regarding the use and relevance of public health research. Knowledge translation methods, such as deliberative dialogues, are believed to increase the use and relevance of such research. However, little is known about how they increase the impact of public health research. This study sought to trace the impact of deliberative dialogues through an actor-scenario approach. Actor-scenario mapping asks key actors to describe how and by whom research findings may potentially be used. This allows for constructing more concrete action plans.

Methods:

This study used a qualitative case-study design with semi-structured interviews, participant observation, and a survey. The study focused on a Jordanian deliberative dialogue organised in April 2019. Interviews were conducted with 15 key stakeholders before and after the dialogue. Observations and surveys were collected during the dialogue. An abductive approach to thematic analysis was used to arrive at key themes for the report.

Results:

The results show that dialogue participants found it difficult to propose concrete scenarios for action. They described that the sensitive nature of some research topics impairs action. Additionally, participants proposed that research funding should be earmarked for concrete actions. Overall, their scenarios proposed that high-level decision makers maintain involved in the knowledge to action process. Some participants mentioned that the articulation of scenarios for action contributes to research impact, since researchers usually do not engage with potential users.

Conclusions:

Actor-scenario mapping is an innovative way of understanding how deliberative dialogues increase the impact of public health research. This scenario approach can inform the organisation of deliberative dialogues by actors such as EVIPNet.

Key messages:

- Actor-scenario mapping can trace the impact of deliberative dialogues.
- The scenario approach can better align the dialogues with policy and practice.

The role of micro-insurance in the field of public health

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Issue/problem:

It is recognized that is very important to have an instrument to mitigate risks and reduce the vulnerability of poor and low-income households, especially in disasters. Health risks are often identified by the poor people as the greatest and costliest risks they face. Millions of people worldwide fall into poverty as a result of excessive healthcare costs because the state doesn't provide them health insurance. Health problems not only impact household budget, but also reduce the productivity and reduce the opportunity for growth. Therefore the reform of social systems poses a considerable challenge.

Description:

In order to remedy the situation, global actors like World Health Organization (WHO, International Labour Organization (ILO), the World Bank (WB) advocate for a special category of insurance, health micro-insurance (HMI), as a medium term solution for health care financing, that tends to access equitable and quality health care. HMI was created to promote insurance coverage among economically vulnerable sections of society. It is one of the potential ways that might provides the protection of low-income people against specific perils in exchange for regular premium payment proportionate to the likelihood and cost of the risks involved.

Results:

As a health care financing mechanism, HMI has a short history, but offers the following benefits: it can improve the access of certain vulnerable populations to healthcare, develop more suitable services, facilitate the participation of civil society and limit fraud, educate populations about social security.

Lessons:

This instrument has not been conceptualized to compete or replace public social protection. Rather, it is most effective when embedded into a comprehensive social protection framework which includes informal, private and other risk management strategies of preventive measures, mitigation and suitable coping strategies.

Key messages:

- HMI can mitigate the risks of population and groups, ill health and provides hope that the poor will receive reliable and adequate access to affordable health care.
- HMI can be seen as a tool for better public health in vulnerable and poor communities.

Citizens' perspectives on genomic sciences and direct-to-consumer genetic tests: systematic reviews

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Background:

Past decades have witnessed enormous progress in the field of genetics and genomics, and yet a low level of awareness among general public has been described. Our aim was to explore the general populations' knowledge, attitudes and behaviors towards genomic sciences, with a focus on direct-to-consumer genetic tests (DTC-GTs). DTC-GTs are genetic tests ordered directly by the public, without the involvement of a healthcare provider.

Methods:

Two systematic reviews were conducted related to citizens' knowledge, attitudes and behaviours. Firstly, we updated the current literature on DTC-GTs by searching PubMed, Web of Science, Embase, Scopus and Google Scholar. Studies published in English from October 2014 to January 2019, conducted in Europe were included. Secondly, we searched PubMed, Web of Science and Embase to review English and Italian studies on genomic sciences from 2003 to 2019.

Results:

In the systematic review on DTC-GTs, we included six studies from Italy, Greece, Germany, The Netherlands and Switzerland. European citizens had an overall low level of awareness and a very small proportion of them had personal experience with DTC-GTs. More than half of the participants were interested in undergoing a DTC-GT, mainly for knowing the risk predisposition to a common disease such as cancer or cardiovascular disease. Concerns were raised about tests' validity and utility as well as data privacy. In the systematic review on genomic sciences, 55 studies were included. The data extraction process is still in progress and our preliminary results indicate low levels of awareness on genomics.

Conclusions:

Our findings showed that European citizens have a modest level of awareness and a high interest in DTC-GT. Understanding the citizens' perspectives toward genomic sciences may contribute to the development of educational programs related to their needs.

Key messages:

- European citizens expressed modest levels of awareness and high levels of interest in DTC-GTs, mainly for knowing the risk predisposition to common diseases.
- European citizens are concerned with the data privacy and DTC-GT's validity and utility.

Use of personal protective equipment among farmers in Nebraska, Lithuania, Latvia, and Slovenia

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Background:

Farmers in the U.S. and in Europe are at a high risk for injury and illness. Farmers have an increased risk of respiratory disease, noise-induced hearing loss, skin disorders, and eye injuries. Many of these health risks can be prevented or reduced through proper use of personal protective equipment (PPE). However, studies show low compliance of PPE use among farmers. The purpose of this study was to identify barriers to wearing PPE, and current health and safety training as potential targets for future intervention, in farmers in Nebraska, Lithuania, Latvia, and Slovenia. The European Cooperation in Science and Technology and the Central States Center for Agricultural Safety and Health collaborated on this study.

Methods:

We administered a 7-item questionnaire to 57 farmers in Nebraska (n = 10), Lithuania (n = 22), Latvia (n = 10) and Slovenia (n = 15). The farmers primarily grew crops (corn, soy) and some raised livestock.

Results:

We found that gloves, respirators, and safety glasses were the PPE most commonly worn; use of face shields were only reported in Nebraska and Lithuania. Only 45% reported wearing PPE always when they needed them. In Nebraska and

Latvia, most farmers reported not wearing PPE because they are not readily available although they have them on the farm; in Lithuania and Slovenia, farmers cited time to don PPE and discomfort as primary reasons. The percentage of farmers who reported receiving training on the selection, use, and maintenance of PPE varied widely-13% in Nebraska, 14% in Lithuania, 40% in Latvia, and 67% in Slovenia. Farmers purchased PPE over the internet, supermarkets, and agricultural cooperatives.

Conclusions:

This study provided an opportunity to understand current perceptions of PPE use and challenges, among a cross section of farmers in the U.S. and Europe. We recommend enhancing training through creative modules to address the needs of farmers.

Key messages:

- By identifying why farmers do not always wear PPE, we can design effective interventions to overcome this barrier; by knowing where they purchase them, we can provide education at these venues.
- This study is a joint collaboration between U.S. and European researchers. This global cooperation has highlighted some similarities but also differences within European countries.

Bridging the Atlantic Projects: nursing students learning to work globally with vulnerable groups

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Background:

Providing care for vulnerable groups requires the development of competencies such as openness to diversity, cultural sensitivity and equity. Health education institutions face the challenge of preparing students in developing these competencies in a global world. The Bridging the Atlantic program, a partnership between the University of the Azores (Portugal) and the University of Dartmouth (MA, US) in the field of Community Nursing, was created to respond to this need. Students from both universities work collaboratively to develop competencies in providing health care to vulnerable groups based on the IN-STEP (International Student Exchange Partnership) Framework.

Objectives:

(i) to contribute to the improvement of the health status of vulnerable groups; (ii) to develop clinical competencies addressing vulnerable groups among nursing students.

Results:

Between 2015 and 2019, 110 students were involved in health promotion projects carried out with aggregates of elderly immigrants, deportees, fishermen, children from low income schools. The benefits for the vulnerable groups were mainly related to raise awareness in the communities concerning the problems these groups face. Regarding the impact of the program on training, students reported they developed competencies on: (i) understanding cultural differences; (ii) recognizing different health care systems; (iii) reconsidering the role of the nurse; (iv) building teamwork; (v) integrating theory into practice; and, (vi) peer mutual learning.

Conclusions:

Engaging in health promotion projects globally through collaborative efforts seemed to be effective for the improvement of health of vulnerable groups and student development.

Key messages:

- Universities need to deepen the development of competencies in students to intervene with vulnerable groups in a global world.
- Although designed for nursing students in a community context, this model can be used in similar ways by other fields of health or social intervention.

Scale-up integrated care for diabetes and hypertension in Cambodia, Slovenia and Belgium

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Many countries struggle to find the best way to treat hypertension (HT) and type 2 diabetes (T2D). As a result, many patients receive suboptimal care, especially vulnerable groups in society. The SCale up Integrated Care for diaBetes and hYpertension (SCUBY) project addresses this important societal issue, by examining the scale-up of existing evidence-based interventions for the control of HT and/or T2D.

The study undertaken in countries with very different health systems, i.e. a developing health system in a low-middle income country - Cambodia; a former socialist high-income country with a centralised health system - Slovenia; and a Western European federal country with a decentralised system-Belgium, develops, implements and assesses roadmaps for the scale-up of an integrated chronic care package (ICP). The ICP consists of (a) identification of people with HT or T2D, (b) subsequent treatment in primary care services, (c) health education, (d) self-management support to patients and caregivers, and (e) collaboration between caregivers. Analysis of the organisational capacity to scale-up the ICP for T2D and HT and to assess contextual barriers and facilitators to do so, informs the development of the roadmaps. Implementation and evaluation of the 3 roadmaps, one per country, assesses the impact on health outcomes and quality of care through the scale-up of the ICP aimed to contribute to sustainable coverage of T2D and HT interventions for more people in each country. The project is innovative because it compares different scale-up strategies for a contextualised common intervention package. It applies the conceptual insights from scale-up science to the field of non-communicable diseases and involves policy-makers, professionals and patients to ensure local relevance and impact. It will generate new knowledge on how to scale-up the ICP for T2D and HT in diverse contexts. The lessons on scale-up will benefit policy-makers in countries with similar contexts.

Key messages:

- Innovative strategies are needed to scale up integrated chronic care for non-communicable diseases.
- The SCUBY project develops, implements and assesses roadmaps for the scale-up of an integrated chronic care package for hypertension and diabetes.

Strategies and measurement for global health governance assessment: a 5-years mixed review

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Global health governance is defined as the use of institutions, rules and processes ‘‘to deal with challenges to health that require cross-border collective action to be addressed effectively’’. Several studies on this have been published, but there is no consensus about the measure of its various aspects. The aim of this study was to search for strategies used by healthcare systems to evaluate their care in global settings and for shared indicators to assess global health governance worldwide.

This systematic analysis of qualitative and quantitative studies was conducted according to the Population-Intervention-COntext model and the Population-Intervention-

Comparison-Outcome models, using search string ''global health and governance and assessment'', from 2014 to 2018 (in biennium 2013-14 WHO and others identified health governance as a global priority). Articles that reported quantitative and/or qualitative evaluation on global health governance were included.

Outcomes were screened by title and abstract, and then by full texts in order to assess eligibility.

From a total of 98, six studies met inclusion criteria. 4 main strategies of global health governance were identified: intersectoral policies (demographic factors, sanitation practices, housing characteristics and social behaviors); food and nutrition, caring to strengthen country-owned governance capacity (high levels of governance are associated with signing up initiatives for undernutrition prevention, OR = 30); disability and rehabilitation, crucial for realization of the right to health; risk factors control and non-communicable disease prevention (tobacco control).

Two set of indicators were found: an expert-informed framework for assessing rehabilitation and a set of primary data sources to evaluate nutrition in fragile countries. Although lots of evidence in literature about globalization, only few areas are adequately measured. Literature about this topic should pay attention to assessment.

Key messages:

- In literature, four local areas were identified having perspective of global health governance: intersectoral policies, nutrition, rehabilitation and non-communicable disease prevention.
- For two of these areas, nutrition and rehabilitation, shared patterns of indicators were found, from primary data sources and expert consensus.

Acceptability and utilization of evidence for decision-making: helminth control, sub-Saharan Africa

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Background:

Public health practitioners are part of a larger global health system, responsible for the implementation of disease-specific health interventions, largely financed by external actors through a variety of mechanisms. Emphasis on the need for evidence-informed decision-making often includes rhetoric for the localization of this approach to assist practitioners in resource allocation. In practice its realisation is challenging. This research addresses the following: what are the evidence needs of local public health practitioners? How acceptable are, for example, modeled disease estimates? What decision-making processes occur for implementation? How do evidence and decision-making processes interact?

Methods:

Examining mass drug administration (MDA) for schistosomiasis and soil-transmitted helminths (STH) in the African Great Lakes region (Kenya, Malawi, Tanzania and Uganda), we use qualitative approaches to collect data, including a series of 4 workshops with district- and national-level MoH personnel, key informant interviews and e-survey questionnaires from a sample of relevant local and global organisations including NGOs. Coded data are analysed thematically.

Results:

Preliminary results provide important insights into the sources, types and format of evidence which local public health practitioners find acceptable and useful for decision-making when implementing disease control measures.

Conclusions:

A variety of factors influence local level decision-making with implications for policy aimed at disease control, such as MDA for schistosomiasis and STH, and global health policy and practice more broadly. First, processes of decision-making at different localities are heterogenous and evidence needs of local practitioners are not well understood. Second, evidence development and knowledge synthesis on health interventions are rarely linked in ways that feedback and respond to local implementation, decision-making practices and public health practitioners.

Key messages:

- Evidence needs of local public health practitioners need to be accounted for when producing and synthesising evidence.
- Multiple factors influence local level decision-making with implications for public health disease control policy.

Implementation research to evaluate an educational intervention for people who inject drugs

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Objective:

In the context of disseminating harm reduction (HR) programmes in Europe, the Eurosider project aims to study the transferability of an effective educational intervention for people who inject drugs (PWID) to four European countries (Bulgaria, Greece, Portugal and Romania). This intervention, entitled Individually-Tailored Support and Education for Safer Injection (ITSESI), has been shown to reduce HIV-Hepatitis C Virus (HCV) risk practices by offering educational supervision during all phases of the injection sequence, from pre- to post-injection.

Methods:

The project employs mixed methods and implementation science. The exploratory first step used qualitative interviews and other available data in each country. The second step consists in implementing and evaluating the intervention using a 6-month study conducted among 300 PWID enrolled in the 4 countries. They are interviewed at baseline and at 6 months. The third step will consist in designing, promoting and disseminating all the tools necessary to transfer ITSESI at the European level.

Results:

Results from the exploratory phase highlighted two main determining factors for the feasibility of implementing ITSESI: funding and a repressive legal context. Preliminary results from a quantitative analysis of data from the second step will provide a baseline description of the 300 PWID.

Discussion:

Findings to date indicate that an exploratory phase is crucial to adapt and transfer the intervention to local contexts and to evaluate it. More globally, the Eurosider project will 1) help understand each local context to adapt the intervention accordingly; 2) assess the feasibility and effectiveness of ITSESI in different contexts; 3) promote and disseminate tools and training to implement the intervention at the European level.

Key messages:

- People who inject drugs in European countries report HIV-HCV risk practices and adequate prevention should be provided.
- The implementation of an innovative educational intervention for people who inject drugs may be one response but requires to take into account contextual factors: funding and repressive drug policy.

DE Maternal, child and adolescent public health

Stress perceived by pregnant and decision-making factors of maternal caesarean section request

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Background:

Pregnancy is a time of psychological vulnerability which can generate intense stress. This represents a maternal and child public health problem. Prenatal stress has harmful impacts on the foetus, the newborn and can cause an increased maternal request for caesareans sections, with nonmedical grounds. The perceived level of prenatal stress factors was assessed in women, as well as mothers' incentives and decision-making factors for a caesarean section on maternal request.

Methods:

A descriptive study on 203 pregnant women, then a comparative study between primiparas (n = 72) and multiparas (n = 131) were carried out with the Antenatal perceived stress inventory. Incentives and decision-making factors for a caesarean on the mother's demand were studied by in-depth interviews with primiparas mothers (n = 16) who had made this choice.

Results:

The perception of stress level during pregnancy is higher at the first quarter regarding the foetus' health, medical and obstetric risks and reverses with the perception of projections linked to giving birth at the last quarter. Primiparas are significantly ($p < 0.001$) more stressed. All the elements of the three assessed factors are very significantly ($p < 0.001$) correlated for the whole population. Among them, 75% choose a caesarean section on maternal request during the first quarter. This choice is confirmed at the end of the second quarter or during the third one for 50% of them, with a one-month time to think for 58.3% of them. The main incentives are tokophobia (66.7%) and preserving the baby's health (50%).

Conclusions:

Pregnancy causes important stress, which is pronounced in primiparas. In France, these results speak in favour of screening tokophobia and an earlier start of birth and parenthood preparation classes in order to handle stress from the first quarter of pregnancy, when medical and prenatal exams are initiated. Birth preparation should be taken on at the last quarter.

Key messages:

- Investigate stress perceived and identification incentives and decision-making factors of maternal caesarean section request it's a solution to building bridge for solidarity with tokophobic women.
- The relation enter stress perceived by pregnant women and decision-making factors of maternal caesarean section request, represents a maternal and child public health problem.

Induced abortions in Estonia, 1992-2017: registry-based study

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Background:

In Estonia, termination of pregnancy is allowed until 12 gestational weeks on request or for medical reasons, and until 22 gestational weeks only for women under 15 or over 45 years of age and for severe medical illness of the mother or the fetus. Information about all induced abortions is collected in the central digital Abortion Registry since 1996. The source document for collection of data is the Abortion Card which is filled in for every abortion that has taken place in a health care institution by all health care institutions (incl. private doctors) who do abortions or provide medical care to women who have had an abortion. The choice of contraceptive devices is large and their price is affordable. Sexual education is included in school curriculum. Councelling about contraception is free for all citizens until 25 years of age. Termination of pregnancy is free only for medical reasons, in other cases there is a small fee.

Methods:

Data for the analysis was obtained from the Estonian Abortion Registry.

Results:

The total number of induced abortions in Estonia decreased from 25803 in 1992 to 4017 in 2017. The abortion rate per 1000 women aged 15-49 declined from 69.6 in 1992 to 14.0 in 2017. The abortion rate among women under 20 has declined from 43 in 1996 to 10.8 in 2017. The abortion rate has always been the highest in the age group from 20 to 24 years. Abortion rates in 2017 varied in different counties from 7.4 to 17.3. In 1996, 97.8 % of preganancies were terminated surgically, in 2017, only 22.3%.

Conclusions:

Although induced abortion is legal and not restricted in Estonia, the abortion rate has fallen rapidly due to sexual education at school, free youth councelling services and easily available contraceptive devices. Abortion Registry database is a valuable source of information for evaluating and planning public health interventions. Regional differences in abortion rates deserve further interventions.

Key messages:

- Abortion rates in Estonia have fallen rapidly due to sexual education, free councelling and available contraceptive devices.
- The Estonian Abortion Registry is a valuable source of information for public health interventions.

The impact of social media misused and behavior problems among adolescent in Thailand

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Introduction:

Recent increased in the prevalence of behavioral problems among young adults has coincided with the raised of popularity of Internet usage including handheld technologies, electronic game and social media among adolescent. However, these information in Thailand is limited. Therefore, this study aim to investigate the association between social media misused and behavioral problems among adolescent in Thailand.

Materials and methods:

The cross-sectional was conducted at 7 public schools located in Central of Thailand in December 2018. The behavioral problems were assessed by using the Strengths and Difficulties Questionnaire (SDQ). Multiple logistic regression analysis was used to identify the risk factors associated with the behavioral problems.

Results:

The total of 1,118 were enrolled into the study. The prevalence of the social media misused and behavioral problems were 85% and 18.5%, respectively. The prevalence of the subscale behavioral problems were peer problem (21%), emotional problem (19%), hyperactivities (10%) and conduct problem (4%). The independent factors associated with behavioral problems were include sleep problem (OR = 3.3, 95%CI =

2.1-5.1), prosocial behavior (OR = 0.4, 95%CI =0.3-0.6), social media misused (OR = 2.5, 95%CI =1.7-3.8), Facebook addiction (OR = 1.8, 95%CI = 1.1-3.0) and Line addiction (OR = 2.8, 95%CI = 1.5-5.1).

Conclusions:

This study highlight the association between the social media misused and high prevalence of behavioral problems among adolescent in Thailand. The information of the potential risk factors should be inform to all stakeholders for develop and implement the effective intervention for young adults in Thailand.

Key messages:

- The association between the social media misused and high prevalence of behavioral problems among adolescent in Thailand.
- The information of the potential risk factors should be informed to develop and implement the effective intervention for young adults in Thailand.

Screenings for children: international programmes & recommendations from evidence-based guidelines

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Background:

Children and adolescents are in general a healthy population group. However, they are exposed to a number of morbidities (physical illnesses and mental disorders) and social burdens (e.g. poverty, violence). In Austria, there are currently no routine screenings for children older than 6 years. The project aimed at providing an overview of international screening programmes and of recommendations from evidence-based guidelines for 6 to 14 years old children.

Methods:

The overview of screening practices in nine selected (mostly European) countries is based on an (Internet) hand search and expert contacts. For the guideline overview, we conducted a search in guideline databases and on websites of institutions.

Results:

We identified four main screenings that were predominantly offered in the analysed countries: screenings of body weight & height, hearing & vision disorders, dental disease and mental disorders. The services are provided in school and/or in doctors' practices, involving physicians and/or nurses. 50 evidence-based guidelines from 16 institutions met our pre-defined inclusion criteria. We identified recommendations for 24 diseases or risk factors. We found most recommendations on screening for overweight and dental disease. Further guidelines addressed infectious diseases, mental disorders, health and risk behaviour, and counselling.

Conclusions:

The results are now used as a basis for discussion for the development of a new screening programme in Austria. The overview provides an international and evidence-based view. However, social determinants of health, such as education and living conditions, were hardly considered in the identified screenings, but should be increasingly addressed in a comprehensive programme.

Key messages:

- Screenings for overweight and dental disease were central in both the selected countries' programmes and the guideline recommendations.
- Comprehensive programmes should not only focus on physical parameters, but should also take into account the social determinants of health.

Perceptions of youth healthcare professionals of the concept Positive Health in the Netherlands

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Background:

Based on public health professionals' opinions, Huber et al. (2011) described health as a dynamic concept that has the potential to increase or decrease depending on contextual factors, yet with the broadness as the WHO definition. She proposed defining health 'as the ability to adapt and self-manage, in the light of physical, emotional and social challenges of life'. Healthcare professionals are exploring how the new concept can be further specified for various fields of healthcare. This study examines the perceptions of youth healthcare professionals to Positive Health and to what extent they experience this concept in current working practice.

Methods:

A mixed-methods research has been used; both quantitative and qualitative data have been collected. A questionnaire survey (n = 97) has been done and semi-structured interviews (n = 12) have taken place to question youth healthcare professionals in public health about the positive health concept.

Results:

Youth healthcare professionals find all the dimensions of positive health important. However, not all dimensions of positive health are suitable in daily practice of youth healthcare professionals in public health. The dimension 'Quality of life' is seen as the most important dimension in terms of positive health. The concept of positive health can be applied within the workfield of youth healthcare professionals. However, the implementation of new concept should be explored.

Conclusions:

This study shows that youth healthcare professionals have a positive attitude towards Positive Health. Youth healthcare professionals consider the all the dimensions important and also embed the aspects of it in their daily practice. However, the implementation of new concept should be explored.

Key messages:

- The Positive Health concept in youth healthcare care is promising.
- Positive Health gives a broader look at health.

Health promotion around the birth

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Background:

With the "Child Protection Act" in 2012, the Prevention Law in 2015 and the new health goal 'Health around Birth' in 2017, the framework conditions for health promotion and prevention in pregnancy have improved. This takes into account the fact that health behavior is essentially determined by embryonic and early childhood experiences in families.

Methods:

First: Analyzing the family-related legal regulations by Early Helps and the Prevention Act as well as the health goal "Healthy Birth"; Second: Analyzing data from 153 interviews with socially disadvantaged mothers; Third: Collecting mothers' impressions (in citations) about physiological, psychological and social coping factors; Fourth: Analyzing conceptually and within different phases of pregnancy (orientation-, self-conception-, subject conception-, anticipation- and birth phase) and postnatal phases (postpartum, family becoming, stabilization and socialization to society) phase-specific prevention needs and potentials identified as well as examples of health promotion.

Results:

Pregnancy and becoming a family are associated with different coping requirements, which should be treated specifically according to phases and social conditions. A tailored analysis provides a variety of methods and approaches for health promotion, which can be offered via setting-approaches or in individual counseling and support. They can be described as parts of family health promotion, which should be designed as a joint task of the health service and child and youth welfare as well as other local actors.

Discussion:

Family health promotion is a complex challenge for the actors in the care, in the social area and in the control levels. It requires an independent, scientifically justified intervention approach with method programs and institutional assignments.

Key messages:

- Pregnancy and becoming a family are associated with different coping requirements.
- It requires an independent, scientifically justified intervention approach with method programs and institutional assignments.

Collaboration between midwives and dietitians in improving dietary intake of low SES women

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Background:

A healthy dietary intake during pregnancy is important for maternal and child health. However, pregnant women with a low socioeconomic status (SES) are less likely to adhere to nutrition guidelines as compared to high SES groups. Midwives in the Netherlands experience limited opportunities to provide nutrition advice. Dietitians could play a role in providing nutrition advice to pregnant women, but collaborations between midwives and dietitians are limited. Therefore, this study aimed to investigate the opportunities and barriers for collaboration between midwives and dietitians in antenatal care for low SES women.

Methods:

Questionnaires were administered amongst 134 dietitians to examine experiences of providing nutritional advice to pregnant women. Four focus groups were organised with midwives (2x) and dietitians (2x) to explore opportunities and barriers for collaboration.

Results:

Questionnaire results indicated that 73% of the dietitians like to see pregnant women more often in their practices and 78% feels the necessity to strengthen the collaboration with midwives. The focus groups showed that dietitians and midwives wish to strengthen the collaboration, but they also experience barriers: a focus on food risks rather than healthy nutrition in antenatal care, lack of referral procedures for women without medical necessity to see a dietitian, negative connotations with referring women to dietitians, and lack of time to discuss nutrition in consults by midwives.

Conclusions:

Midwives and dietitians recognise the importance of strengthening collaborations, but in order to do so, several challenges need to be overcome. In a follow-up of this study, pressure cooker sessions will be conducted to design an integral strategy in antenatal care to empower women to improve dietary intake.

Key messages:

- There is a great potential to strengthen collaborations between midwives and dietitians in antenatal care to empower low SES pregnant women to improve dietary intake.
- Several barriers need to be overcome to design in an integral strategy in antenatal care to improve the dietary intake of low SES prengant women.

Assessment of Adolescent and Youth Friendly Health Services in Sri Lanka using WHO's '4S' Framework

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Background:

The Adolescent and Youth Friendly Health Services (AYFHS) in Sri Lanka (SL) are provided via three service models, viz., hospital-based, field-based and centre-based. This study assessed the implementation status of AYFHS in SL.

Methods:

A panel of experts conducted the review by adopting a participatory approach. Policies and supporting documents were collected from the relevant sectors of the Ministry of Health using electronic and manual search and by visiting institutions/resource persons. The strengths and weaknesses of the AYFHS were identified using the WHO's '4S' Framework consisting strategic information (S1), supportive evidence-informed policies (S2), strengthening services for adolescents (S3) and strengthening collaboration with other sectors (S4).

Results:

While recent development of guidelines, standards and protocols in line with WHO/UNAIDS 'Global Standards for Quality Health-care Services for Adolescents' was the main strength on S1, gaps in timeliness, completeness and accuracy of the data; and the gaps in effective utilization of sub-national level data addressing area specific problems were the main weaknesses. On S2, SL has a strong, supportive policy environment to promote adolescent health. Lack of coherence in existing health related policies was the main gap. A comprehensive health care package was a strength on S3, while difficulty in reaching the vulnerable groups, curative service oriented service package and underutilization of the health services by adolescents were the weaknesses. On S4, lack of sustained political commitment identifying adolescent health as a priority development issue across multi-stakeholders and their silo mentality to maintain the accountability/ownership of cross-cutting programmatic activities were the weaknesses.

Conclusions:

Despite numerous imposing challenges, with mainstreaming and constructive monitoring, the AYFHS in SL will remain as one of the best adolescent health programmes in the region.

Key messages:

- Assessment of Sri Lankan AYFHS according to the WHO's '4S' Framework revealed multiple strengths such as updated guidelines, supportive policy environment and comprehensive care package.
- Despite numerous imposing challenges, with mainstreaming and constructive monitoring, the AYFHS in SL will remain as one of the best adolescent health programmes in the region.

School Health Programme in Sri Lanka: Assessment using WHO's '4S' Framework

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Background:

Sri Lanka has one of the oldest school health programmes (SHP) in the region, which was started in 1918, and at present caters for 70% of adolescents in the country. This study assessed the implementation status of the Sri Lankan SHP.

Methods:

This review was conducted by a panel of experts adopting a participatory approach. Policies and supporting documents were collected from the relevant sectors of the Ministry of Health and Ministry of Education using electronic and manual search and by visiting institutions/resource persons. The WHO's '4S' Framework; consisting of strategic information (S1), supportive evidence-informed policies (S2), strengthening services for adolescents (S3) and strengthening collaboration with other sectors (S4); was used as the guiding framework to analyse the strengths and weaknesses of the SHP.

Results:

Having a comprehensive national health information system was the main strength on S1, gaps in timeliness, completeness and accuracy of the data, and the lack of evidence on perceived health needs of school children were the main weaknesses. On S2, Sri Lanka has a strong unifying policy platform supportive of the SHP, but the timeliest need is to finalise the School Health Policy. More than 90% island-wide coverage of school medical inspection was the main strength on S3, while focusing more on physical health and less emphasis on promoting mental health in the existing service package and gaps in the referral/follow-up were the weaknesses. On S4, school staff focusing more on achieving academic-related outcomes and focusing less on health-related activities, undue media and industry influence hindering the promotion of healthy behaviours in school settings were the main challenges.

Conclusions:

Despite several emerging challenges, the SHP in Sri Lanka is one of the best school health programmes in the region with more than 90% island-wide coverage of health services.

Key messages:

- The SHP in Sri Lanka, which is one of the oldest and the best school health programmes in the region, caters for 70% of adolescents in the country.
- Assessment of Sri Lankan SHP according to the WHO's '4S' Framework revealed multiple strengths such as comprehensive national health information system and high island-wide coverage.

Determinants of health and cancer: investigating conceptions of children aged 6 to 11

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Context:

Qualitative data on how children and adolescents view their health and its determinants are relatively few at the international level. This research is therefore part of a comprehensive and open-minded approach to better describe how elementary school children perceive the determinants of health and cancer.

Objectives:

Our main objective is to map, from a multiphase qualitative protocol, the conceptions and systems of conceptions on the determinants of health and cancers perceived within a 6 to 11 age group.

The secondary objective is to analyze our ability to collect these healthy conceptions from children.

Methodology:

Four different tools were used in four schools for 320 students: (1) ''photo expression'', (2) ''QC (Questions / Certainties)'', (3) ''photo narration'' and (4) ''focus group''. This open and exploratory method, combining the use of photographs and focus groups, provided data on the experiences, stated practices and knowledge of each student. The mobilization of image mediation methods plays an essential ethical role by ensuring the distance between the theme and the child. The informative value of data from qualitative collection tools coupled with a mixed analysis methodology (qualitative and quantitative) allows us to collect dense and efficient data needed to understand the perception of determinants by elementary school students.

Conclusions:

This study identifies promising methodological leads thanks to the complementarity of the different phases mobilized. It also provides us with elements of methodological understanding that can contribute to the development of prevention tools as part of the school health education journey.

Key messages:

- Map, from a multiphase qualitative protocol, the conceptions and systems of conceptions on the determinants of health and cancers perceived within a 6 to 11 age group.
- Analyze our ability to collect these healthy conceptions from children.

eDelphi survey to shape the content of a digital resource to enhance parental health literacy

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Background:

Information-seeking on the internet is very prevalent, in contrast to low attendance of antenatal classes. In addition to varying quality, few digital resources are developed using participatory research approaches.

Methods:

Antenatal learning needs were explored in a modified Delphi survey among the professional community and parents-to-be/new parents. A list of 174 topics was developed using the Nominal Group Technique among antenatal educators and representatives of local professional associations. In an online survey, the relative importance of each was rated on a 5-point scale by the wider professional community and general public. Topics rated by $\geq 80\%$ as at least ''very important'' or by $\geq 50\%$ as ''essential'' by either group were shortlisted and re-rated by delegates of the annual Midwifery conference.

Analysis:

193 health professionals (77.7% midwives) and 275 mothers-to-be/new mothers (56.4% attendance of antenatal classes) participated in the online survey. Based on pre-set criteria, 95 topics (54.6%) were identified, 55 (31.6%) nominated by both groups. Among 18 themes, those with the highest number of nominated topics were: Breastfeeding, Prematurity, Giving birth, Caring for Baby and Mental health & well-being. There was good agreement between the two groups (r = 0.88) and in the top 20 single topics, thirteen were common. Priorities were largely unchanged in the last round, but a number of new topics emerged, including pre-eclampsia and domestic abuse. On a 1-10 scale, health literary of expectant parent was rated at M = 5.7 (SD 1.5) by professionals.

Conclusions:

In a ''changing landscape'' of antenatal education, new technologies provide opportunities for broader reach. This formative research study explored the perceived learning needs and local priorities in order to shape the content of Baby Buddy, a public health digital intervention to enhance the health literacy of new parents and support the educational role of health professionals.

Key messages:

- Local needs and priorities for a digital parenthood platform were identified using a Delphi method.
- Participatory formative research can maximize the potential though co-creation and co-ownership.

Smoking and substance abuse prevalence in adolescents in a city of Turkey

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Background:

The aim of this study was to determine the prevalence of smoking and abuse of substance among young people aged 14-18 in a city of Turkey and to determine the relationship between smoking and substance abuse risk.

Methods:

This cross-sectional study was conducted on high school students studying in Bingöl city center. The universe of the study consists of 14000 students studying in 14 high schools. The minimum sample size required to be reached in the sample size analysis with reference to 80% power and 99% confidence interval was found to be 1235. According to the stratified sampling method, the students were randomly reached in schools and questionnaires were conducted under supervision by taking their consent. Chi-square test, Binary Logistic Regression test were used for data analysis.

Results:

The mean age of the students was 15.71 ± 1.16 (min-max: 14-18) and 49.5% were male. The prevalence of smoking among all students is 15.8%, addictive substance use / trial frequency 5% except smoking. The prevalence of smoking among male students is 24.1%, in female students 7.7%. The rate of using addictive substance was found to be 8.2% for male students and 1.9% for female students except smoking. According to the results of Logistic Regression; substance abuse increases 8 (95% CI:3,32-19,95) fold in smokers (p = 0,001) and 2.5 (95% CI:1,10-5,38) fold in men (p = 0,027). The risk of substance use increases 1.05 (95% CI:1,02-1,08) fold as the number of cigarettes smoked daily (p = 0,001). Substance abuse risk of 18-year-olds shows increase 1.5 (95% CI:1,06-1,93) fold according to 14 years old (p = 0,021).

Conclusions:

Smoking and addictive substance use in adolescents are particularly remarkable in male students (8.2%). This result is higher than the data reflecting Ä°stanbul (7%). This may be due to the fact that the province is located at the crossing point of drug traffic. Smoking increases the risk of other addictive substances (marijuana, heroin, etc.).

Key messages:

- Smoking and substance abuse is an important health problem in adolescents according to this study.
- Male students smoke are at risk of substance abuse more than female.

The effect of Women's decision-making autonomy on family Planning acces in Senegal in 2017

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Background:

The impact of access to decision-making on women's health in the choice of fertility control has been highlighted by research. The aim of this study was to analyze the impact of access to decision-making for women's health on access to family planning in Senegal in 2017.

Methods:

The analyses of this study had been done on the Individual Records file of Senegal's Demographic Health Survey 2017. This data covered 8865 women aged 15 to 49 years. The propensity scores matching method had been done. The variable access to the decision was considered as the variable of interest. Matching was done using variables that were not modified by the effect of the treatment. These were religion and socio-economic level. The outcome variables were modern contraceptive use, the existence of unmet needs and the type of modern contraceptive method used. Significance was at 5%. The condition of common support had been respected. The analysis was done with the STATA.15 software.

Results:

Six percent (6.26%) of women could decide about their health on their own. Access to decision-making increased significantly with the woman's age ($p < 0.05$). Fifteen percent (15.24%) women used a modern contraceptive method. Women using a contraceptive method were more numerous in the group with access to decision-making (29.43%) with a significant difference with the other group of 8% ($p < 0.05$). After matching, there was no significant difference between women in terms of modern contraceptive use and the existence of unmet needs. There was a significant difference in the type of contraceptive method used between the two groups of women. These differences were 23.17% for Intra Uterine Device, 52.98% for injections, 08.9% for implants and 10.79% for condoms.

Conclusions:

Access to decision-making for health would facilitate women's access to long-acting contraceptive methods. These findings show the importance of implementing gender transformative interventions in improving access to family planning.

Key messages:

- Access to decision-making for health would allow better access to modern contraceptive methods, especially those with a long duration of action.
- Better consideration of gender disparity reduction could improve access to family planning in Senegal.

Association of maternal developmental disorder traits with child maltreatment

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Objective:

Maternal mental disorders are known risk factors for child mistreatment. However, little is known about the involvement of maternal developmental disorder traits. The aim of this study was to examine maternal traits related to Pervasive Developmental Disorder (PDD) and Attention Deficit Hyperactivity Disorder (ADHD), and their possible association with child maltreatment.

Methods:

Maternal PDD and ADHD were assessed through a self-administered questionnaire (N = 846) during mid-pregnancy using the Pervasive Developmental Disorders Autism Society Japan Rating Scale (PARS) and Adult ADHD Self-Report Scale (ASRS). The mothers completed another questionnaire on child mistreatment when the offspring was approximately 18 months of age. The associations between maternal PDD and ADHD traits and child maltreatment score were analyzed using linear regression models adjusted for covariates.

Results:

Mothers who exhibited stronger PDD traits showed significantly higher child maltreatment score, even after adjustment for maternal characteristics at baseline and ADHD traits. At the same time, ADHD traits were significantly associated with child maltreatment after adjustment of covariates, although the association became non-significant after adjustment of PDD traits.

Conclusions:

Mothers who showed PDD and ADHD traits during pregnancy were more likely to maltreat their children. It is essential to educate mothers with such traits with appropriate, easy-to-follow childcare instructions, preferably in simple language combined with pictorial aids.

Key messages:

- Maternal developmental disorder traits are risk factor of child maltreatment.
- Specific parenting training intervention for mothers with developmental disorders are needed.

Maternal health care for refugee women in Germany: A qualitative approach on the interaction level

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Background:

In the recent past, the number of forcibly displaced people increased worldwide. About 1/3 of the persons seeking asylum in Germany are female. The majority of all refugee women who are coming to Germany are currently of childbearing age. Refugee women are considered a highly vulnerable refugee subgroup, as they frequently experience physical strains and psychological burdens while fleeing their home countries and being pregnant at the same time. Moreover, pregnancy and the following period require specialized care and support in order to allow a transition to maternity without complications. The aim of this project is to analyze maternal health care services for refugee women on the level of interaction with maternal health care professionals in Germany.

Methods:

Maternal health care professionals in outpatient and clinical settings with experiences of caring for refugee women were recruited. Semi-structured interviews were conducted. The interviews are currently analyzed following the standards of qualitative thematic analysis.

Results:

Maternal health care professionals experience challenges in executing particular maternal health care actions, such as taking the medical history where there is no communication possible or performing examinations where there is no or little privacy (e.g. in camps). In addition there are changes in tasks, which are no subject to originally maternal health care, such as organizing translation and transportation. Furthermore they face a shortage of resources (e.g. translators, time), which constrains them to find solutions on an individual level.

Conclusions:

Maternal health care professionals provide maternal health care to refugee women under special circumstances (e.g. communication barriers, discontinuity of care). As there are limited resources (e.g. translators, time) they develop solutions and strategies on an individual level.

Key messages:

- Challenges and opportunities are disclosed by examining maternal health care professionals' actions.
- Maternal health care improves through understanding maternal health care professionals' strategies.

''Shared learning in action'' - model of early prevention program on drug abuse in primary schools

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Issue/Problem:

In Serbia, 12,8% of younger adults and 16,5% of sixteen years old adolescents have tried some of the illegal drugs. ''Creative workshop with schoolchildren on prevention of drug abuse'' program was developed as a part of National strategy against drug abuse, aiming to improve capacities of teachers and children in primary schools.

Description of the practice:

Program based on educational approach ''Shared learning in action'' changes traditional school roles, transforming teachers into facilitators, allowing full expression of children's ideas, thus enhancing development of their emotional intelligence. Children's research about drugs mobilizes an extensive list of supporters in gathering relevant information: health workers, police, psychologists, teachers, parents and media. This information is then shaped into a variety of products with strong public health messages: songs, posters, comics, brochures, short plays and videos.

Results:

Since 2010, around 450 teachers and nearly 7000 children in 115 Belgrade primary schools were included. Children's knowledge about drugs has an upturn of over 50%, concurrently with improvement of their teamwork skills, self-confidence, research and creative potentials. Both teachers' and children's evaluation grades show a high level of satisfaction with the program.

Lessons:

This program is an example of cooperation between educational and health sector, followed by a well implemented monitoring system and quality improvement. Its universal and flexible approach made it a part of official curricula in several schools. It was acknowledged as good practice by the Institute for improvement of education in 2012 and The City of Belgrade in 2018. Since 2014, the program has its Facebook page ''Tvoje znanje menja sve''.

Key messages:

- High grade of children autonomy, supported by teachers and community, makes the learning process amusing and effective.
- Program achievements demonstrate its potential for systemic implementation to a wide range of public health topics.

Prevalance of Using Cigarette,Alcohol,Substance Among High School Students and Factors Affected Them

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Background:

Usage rate of cigarette, alcohol, and substance is increasing day by day.Protectiv efactors have primary importance for prevention of substance use.The aim of this study is to investigate the prevalance of using cigarette, alcohol and substance and research relationship between risk factories and substance using, among high school students.

Methods:

Ä°n Malatya city there are 17866 Anatolian, 14381 Vocational,10362 Religious high school students.Totally all of this 42629 students form the universe of this cross-sectional study. When the prevalance of using cigarette accepted as 25 % in high school students; sample size in Anatolian high school,Occupatioanal high school and Religious high school was found 283, 283 and 280 respectively.This survey was conducted in 9 different high schools which choosed by stratified sampling method, and 975 high school students have been reached in this survey.Ä°n the statistical analysing of data,Chi square test, logistic regression test were used.

Results:

The prevalance of cigarette, alcohol and substance using found 34%, 14.3% and 4.2% respectivey among students participating in the survey.Cigarette using; in male students is 2.2 times higher (Cl 95%,1.661-3.073), in alcohol users is 7.6 times higher(Cl 95%,4.919-11.834)($p < 0.05$).Alcohol using is 9.6 times higher(Cl 95%, 5.712-16.250) in cigarette smokers($p < 0.05$).And alcohol using in students with alcohol use in their families is 26.8 times higher(Cl 95%,12.489-57.711)($p < 0.05$).Substance using; found 12.2 times higher(Cl 95%,4.900-30.566) in alcohol users,2.4 times higher(Cl 95%,5.712-16.250) in cigarette smokers and 5.6 times higher(Cl 95%,1.366-23.068)in students with substance use in their families ($p < 0.05$).

Conclusions:

Cigarette using is more common in males and alcohol users.Alcohol use increses in smokers and students with alcohol use in their families.Substance use among students increases when student uses cigarette or alcohol and if there are substanceuse in their families.

Key messages:

- Alcohol use increses in smokers, smoking increses in alcohol users.
- Substance use increses in smokers, alcohol users and in the students with substance use in their families.

Indications and practices of Cesarean Sections in a French region – The Robson classification

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Background:

Cesarian-section (CS) deliveries, although sometimes vital, are associated with increasing immediate- and long-term maternal and/or neonatal risks. The objective was to describe the indications of scheduled CS, measure the potentially avoidable CS and study the rate variations between maternities in one French region, Centre Val-de-Loire (CVL).

Methods:

A cross-sectional study was conducted from September 2016 to February 2017. Information about all CS performed in the maternities of the region was collected: medical history, indication, schedule. Data collection was completed with the 2016 regional birth data repository (25,864 deliveries, including 19.2% of CS, among which 7.0% were scheduled). CS were classified according to the pre-existing risk high or low of CS as defined by the Robson classification.

Results:

During the study period, 1,979 CS (18.6% of deliveries) were performed, of which 762 were scheduled (7.1% of deliveries). The main indications for planning a CS were: scarred uterus (60%, of which 56% with only one previous CS) or breech presentation (25%), considered at high risk of CS according to the Robson classification. For these two contexts, the regional birth repository showed decreasing scheduled CS rates from high to low level of maternities' expertise. Remarkly, 22 nulliparous women with a single cephalic pregnancy in spontaneous labor before term (Robson's low risk of CS) had a CS performed for unfavorable pelvimetry (0.2% of deliveries).

Conclusions:

This study allowed identifying specific potential interventions: targeted CS on scarred uterus with only one previous CS or breech presentation, as recommended by national guidelines, and targeted use of radiologic pelvimetry. The Robson classification must be widely used to assess practices through cautious maternity comparisons to improve quality of care.

Key messages:

- Although potentially avoidable c-sections are rare, interventions were identified: targeted CS on uterus with one previous CS or breech presentation, targeted use of radiologic pelvimetry.
- The Robson classification must be widely used to assess practices, in order to improve healthcare quality.

One-year activity of a ''Casa de Espera'' (Maternity Waiting Home) in the south of Angola

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Background:

Maternity Waiting Homes (MWHs) are structures usually located close to health facilities able to provide emergency obstetric care. Women can decide to be hosted in MWHs and when labour begins they move to the health facility for the delivery. Although the effectiveness of MWHs is debated, literature shows increasing findings about their importance. Aim of the study is to describe a one-year activity of a MWH located in Angola.

Methods:

Since 2000, Italian Non-Governmental Organization (NGO) Doctors with Africa CUAMM supports the activities of the hospital of Chiulo in the district of Ombadja (Cunene province). Among the implemented projects, the NGO supports the local MWH (in Portuguese, ''casa de espera''), providing dedicated staff and food for all the women hosted in the MWH. The MWH team routinely performs antenatal care visits and brief talks regarding maternal health. In case of pregnancy complications, the staff promptly refers women to the nearby hospital. The MHW team is also involved in routine data collection.

Results:

In 2018, 703 women were admitted in the MWH. Three-hundred and forty-two (48.6%) were between 18 and 24 years of age. Four-hundred and eighty-two (68.6%) were invited to join the MWH by personnel of local health facilities, while 160 (22.8%) by family members and 61 (8.7%) by community health workers/traditional birth attendants. Age less than 18, previous abortion and/or caesarean were the most assessed factors for high risk pregnancy. In 2018, 1364 deliveries were performed in the hospital, and 593 (43.5%) concerned women hosted in the MWH.

Conclusions:

To achieve the 2030 Sustainable Development Goals targets regarding maternal and neonatal mortality, the implementation of MHWs could represent an effective tool, especially in countries such as Angola where these indicators show a weak annual reduction. Regarding Chiulo's MWH, an improvement of data collection could lead to a better comprehension of the efficacy of the facility.

Key messages:

- In the SDGs era, countries with a high burden of maternal and neonatal mortality should implement various and integrated approaches to achieve significant reductions of these indicators.
- Although the effectiveness of maternity waiting homes is still debated, increasing findings suggest that they could

represent an effective tool to contain mother and child mortality.

Finding alternative roles for Traditional Birth Attendants: an experience from the south of Angola

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Background:

Reduction of maternal mortality ratio (MMR), a key indicator contained in the Sustainable Development Goals (SDGs), is strictly related to maternal empowerment and to an increasing access to skilled care in pregnancy, childbirth and postpartum. The WHO recommends to define alternative roles for Traditional Birth Attendants (TBAs) in the transition from birth with TBAs to birth with Skilled Birth Attendants (SBAs), in particular in countries where maternal care services still do not meet recommended standards.

Objectives:

In 2018, the Italian Non-Governmental Organization Doctors with Africa CUAMM and the District Health Department of Ombadja (a 350000 inhabitants district in Cunene province, south of Angola) started a three-year multifaceted project to support and strengthen local health services. Aim of this work is to describe the first six months of an implemented activity involving 120 local TBAs, identified and trained to perform basic educational talks in the district territory regarding topical issues of mother and child health. TBAs were also engaged in the referral of pregnant women to health facilities with SBAs.

Results:

From June to November 2018, TBAs performed 2272 talks about maternal and child health issues: healthy pregnancy (551 talks, 24.3%), nutrition (404, 17.8%) and malaria (370, 16.3%) were the most debated topics. The total of women's presences during these educational talks was 57504, and 15379 of them (26.7%) were pregnant. TBAs referred to health facilities 226 pregnant women for a delivery assisted by SBAs.

Conclusions:

Angolan estimated MMR in 2015 was 477/100000 live births: therefore, more efforts should be made to contribute to the achievement of 2030 SDGs target of 70/100000 globally. Moreover, the country percentage of deliveries assisted by SBAs is less than 50%. Promoting alternative roles for TBAs into the mother and child health framework could represent an effective way to improve maternal and neonatal outcomes.

Key messages:

- According to the World Health Organization, defining alternative roles for traditional birth attendants could represent an effective way to support the health of women and children.
- Traditional Birth Attendants can play an important role in providing basic health education and in the ''referral chain'' of pregnant women to health facilities with skilled birth attendants.

Abortion among French students: result of a 15 years follow-up in a French university

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Issue:

The level of abortion in France is judged high, and since 2002 a policy is developed among students to lower it in this particular population

Methods:

Since 2003, every 2 years we made an anonymous survey on abortion frequency, reasons and care in our university, which has between 12.000 and 12.000 she-students. We work on data from abortion centres of our area.

Results:

Abortion rates are stable (5,3-8,5%0), half of the French rate for women (12,0-15,1%0).The risk is significantly lower for French students (6,3%0) compared to students from China (relative risk - RR 1,7, with a significant fall since 2011 - after a specific information campaign on contraception in France), North Africa (RR 2,0 stable) and Sub-Saharan Africa (RR 7,6 stable). ¼ had no contraception, ½ used condoms and 1/3 used oral contraception. 7,2% took emergency contraception. Medical abortion count for 1/3, but ¾ of the surgical techniques could have been replaced by medical drugs. After abortion, condoms are no more used and only 1% of the she-students decided not to take contraception. The main change is the fall down of the use of oral contraception after abortion (from 77% to 43%) replaced by intra-uterine device (IUD- from 1,7% to 22,5%) and contraceptive implant (CI- from 6,4% to 19,6%). Complete qualitative and quantitative results for 2018 will be also presented.

Lessons:

General information on contraception did not change abortion rates, except for Chinese students. But, the increase use of hidden contraception (IUD and CI) after abortion encourage us to insist to the use of these hidden devices for the she-students belonging to social groups where contraception is discredited as a way to promote ''bad habits''.

Key messages:

- Since 2003, abortion rates are stable among french students, and concerned mainly foreign students.
- The greater use 'hidden' devices of contraception may improve this situation.

Direct and the Indirect Determinants of Weight-Control Behaviours among Adolescents

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Background:

Economic determinants such as socioeconomic inequalities and parents' employment have a profound impact on the health of adolescents in terms of unhealthy weight-control behaviours (UWCB). In addition, various family factors may play a role in adolescents' weight-control behaviours (WCB). This study examines the association among socioeconomic status, perceived family wealth, and number of employed parents and Israeli adolescents' WCB and asks whether family variables (parental communication, monitoring, support, and family meals) mediate WCB.

Methods:

Data from the cross-sectional questionnaire of the 2014 Israeli Health Behaviour in School-Aged Children study are analysed using structural equation modelling. The research population includes approximately 7,000 Israeli schoolchildren in grades 6, 8, and 10. The association among socioeconomic status (SES) factors (SES measures, parental employment), socio-demographic factors, and weight-control behaviours among adolescents is calculated.

Results:

High family affluence and high perceived family wealth are negatively associated with unhealthy weight-control behaviour. Having two employed parents leads to lower levels of UWCB. Family-related variables like family communication and support and parental monitoring are found to mitigate unhealthy weight-control behaviours. Family meals have a significantly positive effect on healthy weight-control behaviour and a significantly negative impact on unhealthy weight-control activities.

Conclusions:

The findings suggest that economic factors such as SES and number of employed parents are necessary strategies for long-term weight-control practice. The combination of WCB and family meals is the most effective method for adolescents' healthy weight-control behaviour.

Key messages:

- The study highlights the importance of considering the quality of family communication and support as a health asset that may contribute to WCB among young people.
- Family affluence and perceived family wealth, which were two separate measurements, were perceived differently by adolescents.

Cancer education support project: Spread of cancer education in Japan based on web search

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Background:

Since 2019, cancer education has been introduced in health classes from junior high school students in Japan. This research contributes to how "cancer education," which is a newly launched cancer countermeasure plan, penetrates the general public.

Methods:

In August 2018, the authors prepared an operation manual for classifying Web search results. A researcher majoring in informatics performed the operations outlined below.

- For the list (top 100 results of a Google search) of the Web search results using "cancer education" as the keyword, the link destinations starting from the top result were viewed in order using the browser.
- The name of the organization, the format of information media, summary of website information, and actions in case of a broken link were documented by the researcher.

Results:

"Ministry of Education, Culture, Sports, Science and Technology Elementary and Secondary Education Bureau" occurred the most frequently at the rate of four times when the source word was "cancer education." When this rate of occurrence was tabulated by the organization, the order was as follows: average companies (21.7%), prefectural (17.4), medical facility (12.0), and educational committee (9.8). In the format of information media, page link was the most common, followed by news articles and PDF files. The business type of the average companies were classified as follows: internet operations (30%), new website management companies (20), mail-order companies (15), and pharmaceutical companies (10).

Conclusions:

Although public facilities and hospitals were more commonly involved in promoting cancer education, the holding of educational seminars by insurance companies and the creation and publication of cancer educational videos by pharmaceutical companies gradually trigger the interest of private companies in cancer education. The possibility of contribution to future development was demonstrated. This work was supported by 14th Hakuho Research Grant.

Key messages:

- In Japan, cancer education was introduced to school education from 2019.
- Private companies are expected to entry into cancer education in the future.

Health related behaviours of secondary students living in dormitory in Hungary

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Background:

Previous studies have shown that unhealthy eating habits and lack of exercise are still widespread among high school students. Hungary and many other countries have attempted to introduce campaigns and health education programs among adolescents to promote healthier lifestyle, but the effectiveness of these programs is unclear. Our aim was to investigate the consistency between knowledge and behavior in adolescents.

Methods:

A self-administered questionnaire survey was conducted in 9 secondary schools' student dormitories, involving 163 students. Descriptive statistics were estimated and chi2- test was used to compare the prevalence between groups.

Results:

Of the participants 69.3% reported their health status good, girls and those students who studied in vocational school frequently considered their own health bad ($p = 0.002$). Almost all of them highlighted the importance of regular physical activity, but 27.7% had low physical activity. Daily consumption of fruit and vegetables seems to be characteristic just half of the students, the structure of their daily snacks consists more in sugar-sweetened snacks (21.7%) and energy dense beverages (22.8%). Students with higher level of health-consciousness rated better their own health status and took exercise more frequently, but the higher level of health-consciousness had not positive effect on the healthy food consumption ($p = 0.143$).

Conclusions:

Our findings suggest lack of exercise and unhealthy eating habits were still widespread among high school students. The results of the study showed that adolescents have sufficient knowledge about healthy lifestyle, however, it has little impact on their health-related behaviour.

Key messages:

- The most important characteristic of an effective health promotion programme is its ability to change behaviour.
- Health promotion programmes should continue in schools, especially focus on behaviour changing interventions to effectively influence the health of the students.

Teenage mothers: a long-term view on their well-being

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Background:

This study aims to address the lack of information about teenage mothers in different stages of their lives by exploring how they are doing in the long term and the social support they receive.

Methods:

From December 2018 to February 2019 teenage mothers in the Netherlands were recruited by Fiom (an expert centre for unintended pregnancy), via social media and a website for teenage mothers (n = 248). Using an online survey, data were obtained to assess various outcomes, such as well-being, education, work, income, housing and social support. Respondents were divided into three groups: 0-3 years after teenage childbearing (short-term), 4-12 years (medium-term), >12 years (long-term). Results were analysed using univariate and bivariate descriptions in SPSS.

Results:

Almost 80% of the respondents reported that they were doing well and were satisfied with their life. 63.3% had a job, and 17.0% was enrolled in education. Short-term mothers worked fewer hours per week compared to long-term mothers ($p < 0.001$). 85.1% of the respondents reported that they received benefits, short-term mothers receiving more benefits than long-term mothers ($p < 0.001$). The majority (78.2%) was satisfied with their living conditions; short-term mothers were less satisfied than long-term mothers ($p = 0.031$). 36.3% of the respondents smoked cigarettes. Most support was given by family (83.1%), mainly from female relatives. About 24% of the respondents received formal support.

Conclusions:

This study shows that teenage mothers, on average, were doing well and were satisfied with their life, in both the short and long term. Regarding income and housing, short-term mothers were in a less favourable position. These results suggest that as the years pass, teenage mothers overcome difficulties. Since the association between well-being and social support on the long term is unknown, we advise investigating the effect of social support on the outcomes of teenage childbearing.

Key messages:

- Both in the short-term and the long-term, most teenage mothers were doing well and satisfied with life.
- Regarding housing and income, short-term mothers function less well compared to long-term mothers.

Caesarean Delivery Rates in Birth Centres: confrontation using Robson Classification

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Background:

A caesarean section (CS) is a life-saving procedure, reducing perinatal mortality and morbidity, over last decades CS rates are increasing. In 2015 the Robson classification (RC) was introduced by WHO as a global standard for assessing, monitoring and comparing CS rates within healthcare facilities and between them. The aim of this cross-sectional study was to identify the most numerous groups according to RC.

Methods:

All women, who delivered by CS from January 2015 to June 2017 in two hospitals in the province of Siena (Italy): I level Birth Centre of Grosseto (GR) and II level Birth Centre of Siena (SI) were included. Age, type of hospital and group based on RC were extracted from Medical Register. The RC divides women into 10 groups based on 5 basic obstetric characteristics (parity, number of foetuses, previous CS, onset of labour, gestational age, foetus presentation). The percentages of the group's contribution to the overall CS rate were calculated and confronted for two birth centres. All analysis was performed with Stata.

Results:

A total of 2115 women was analysed, 50.5% from SI. Average age was 34.3±5.7; significantly higher for SI (34.7±5.6vs33.9±5.8). Most contributing groups were group V: multiparous, singleton, cephalic, term, with previous CS (24.2%), group II: nulliparous, singleton, cephalic, term, induced labour or CS (24%), group I: nulliparous, singleton, cephalic, term, spontaneous labour (11.45%), group VIII: multiple pregnancy (10.7%) and group X: singleton, cephalic, pre-term (10.4%).

Differences for type of birth centre were observed for groups I, II, V and VIII: I and VIII were more numerous in SI, II and V in GR (chi2; $p < 0.05$).

Conclusions:

The most numerous groups were I, II e V, concordant with literature. Reduction of CS rates in group V could be obtained through lowering of primary CS rates and by promotion of Vaginal Birth After CS. Healthcare professionals could help to reduce labour-related anxiety and elective CS rates.

Key messages:

- The most contributing groups to overall caesarean section rates were groups I, II e V, as reported in literature.
- Reduction of CS rates could be obtained through lowering rates of primary CS, but also by promotion of Vaginal Birth After CS.

Cesarean delivery and its social determinants in women of childbearing age: analysis of Benin's DHS

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Background:

Caesarean delivery, usually performed on a medical indication, is intended for maternal or fetal rescue. Accessibility issues justify setting up a so-called model of "free caesarean" in several developing countries, including Benin, in order to reduce social inequalities and contribute to the reduction of maternal and neonatal mortality. The study aimed to identify the determinants associated with caesarean delivery in women aged 15-49 in Benin.

Methods:

This is a secondary analysis of data from Benin's Demographic and Health Survey (DHS) 2017 - 2018. It was limited to mothers aged 15 to 49 who gave birth to at least one child in the 5 years preceding the survey. The socio-demographic characteristics of the mother and the variables related to pregnancy were the independent variables. Association between cesarean delivery and its determinants was assessed by odds ratios and their 95% confidence interval using a logistic regression.

Results:

The percentage of mothers who gave birth by caesarean was 6.84%, 95% CI = [6.07; 7.59]. The average age was 29.37 years, 95% CI = [29.20; 29.55]. The probability of cesarean delivery was higher with women aged 45 years and older (OR = 3.33, 95% CI = [1.85, 6.01]), living in urban areas (OR = 1.41, 95% CI = [1.08 1.84]), from rich or very rich households (OR = 1.98, 95% CI = [1.29, 3.05], OR = 1.87, 95% CI = [1.19, 2.96] respectively) and educated (OR = 1.63 95% CI = [1.19, 2.24] and OR = 1.81, 95% CI = [0.97, 3.39] for the secondary and upper levels respectively).

Conclusions:

This analysis shows that cesarean delivery remains associated with the socio-demographic characteristics of the mother, including the level of economic well-being. The current financing model of cesarean should be evaluated for effectiveness and further interventions need to be implemented to account for other factors of disparity.

Key messages:

- Benin health authorities should improve the geographical accessibility of Cesarean section, especially in rural areas.
- The strategies proposed to improve the financial accessibility of cesarean section do not seem effective, so the Beninese authorities should think about revising them.

Pregnancy warning labels on alcohol packaging: results of an exploratory study

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Background:

In 2017, approximately 11% of pregnant women in France consumed alcohol despite its harmful consequences on the fetus (Andler, 2018). Our research aims at exploring the impact of warnings displayed on alcohol packaging: the current pictogram and alternative possible messages that differ regarding content and design will be explored.

Methods:

In-depth interviews were conducted with 20 French women, including women who did not drink alcohol during their pregnancy, women who drank alcohol, women in pregnancy planning and breastfeeding mothers.

Questions were asked about the participants perception of drinking alcohol during pregnancy, alcohol warnings: the current pictogram, new contents (negative and positive) for warnings and new designs (different pictograms combined with or without text). A thematic content analysis was carried out.

Results:

The current pictogram lacks visibility and has no impact on the behaviour of the women.

New suggested contents were on the whole welcomed. It can be noted that some participants felt that specific messages (e.g. intellectual disabilities, facial malformations etc.) were a more effective way of preventing alcohol consumption during pregnancy than general ones. On the contrary, other participants felt that a general message such as 'Zero alcohol during pregnancy', or positive messages such as a cessation service message, was more effective.

The majority of participants believed that pictograms with a better visibility; more eye-catching; vivid images of fetuses, etc., would have a greater impact on alcohol consumption.

Conclusions:

This study highlights the need for changes to pictogram currently used on alcohol packaging in France. Our results show that recent changes proposed by the French government (a slight increase in the size of the current pictogram) will most likely have little effect on preventing alcohol consumption during pregnancy.

Key messages:

- The current pictogram on alcohol bottles in France has little or no effect.
- The French government should implement new warnings both in terms of content and design.

Cosmetics and pregnancy: perception of health risk by health professionals and pregnant women

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Contex:

During pregnancy, the International Federation of Gyneco-Obstetrics (FIGO) advocates limiting exposure to chemicals present in everyday products, including cosmetics. However, both pregnant women (PW) and perinatal health professionals (PHP) know still poorly this source of exposure. AIMS: The PERICOS-Quali Study aims to identify the perception of the risk associated with the use of cosmetics during pregnancy by PHP and PW.

Methodology:

A qualitative survey was conducted among PHP and PW in Auvergne (France). The data were collected by semi-structured interviews with the PHP and by focus group with the PW, until saturation of the speeches, by an experienced investigator, with an interview guide. The interviews were recorded, the verbatim was transcribed and subjected to a thematic analysis with the N-VIVO v11 software.

Results:

12 PHP (5 midwives, 2 general practitioners and 5 obstetricians) and 24 PW were interviewed. PHP and PW considered cosmetics as wellness and body-care products. Furthermore PHP noted that during pregnancy women used more often organic products, moisturizers or anti-stretch marks, and reduced the use of perfumes, deodorants. In the absence of recommandations based on Evidence-Based Medecine, PHP and PW considered the risk related to cosmetics as not major. The PHP (especially midwives) reported giving advice to comfort the pregnant women; their positioning was not to prohibit the use of cosmetics during pregnancy. PW did not identify PHP as reliable sources of information about cosmetics.

Conclusions:

PHP are seeking for tools to help them to better advice PW. And PW would like also to have pertinent advices about cosmetics to make a reasoned choice.

Key messages:

- Health education about use of cosmetics during pregnancy is necessary.
- Pregnant women and health professionals don't perceive health risk linked to cosmetics.

Evaluation of the oral health of pregnant women in prenatal consultations in Côte d'Ivoire

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Background:

Despite the proven links between oral health status and adverse pregnancy outcomes, oral examination is not systematically integrated into prenatal examinations in Côte d'Ivoire. In addition, there are no prevention messages specifically targeted at pregnant women. Objective: To assess the oral health of pregnant women in Côte d'Ivoire.

Methods:

A cross-sectional survey was conducted at the Maternal and Child Health Department of the National Public Health Institute in Abidjan. The data collected were: age, education level, marital status, source of income, trimester of pregnancy, gestational age, oral hygiene habits and the fact that they whether or not received oral health information. A clinical examination was conducted to assess oral hygiene (OHIS index), periodontal condition (CPI index), dental condition (DMFT index), as well as the presence of epulis, erosion or dental mobility. Frequencies and counts were calculated for the different variables in the study.

Results:

A total of 207 women were observed. The age range was 15 to 44 years with 14.0% under 19 years old. The majority were in couple (76.8%), multi-gesture (77.3%), and more than half had no education (52.2%) or source of income (56.0%); 50.7% snacked between meals and 33.3% had vomiting. They brushed their teeth at least twice a day (70.0%) and had not changed their oral hygiene habits (77.3%) during this pregnancy. Only 3.4% had information on oral health conditions during pregnancy. The frequency of caries was 75.4%, dental erosions 13.0%, gingivitis 57.0%, periodontitis 6.8% and epulis 3.4%.

Conclusions:

The results suggest the integration of systematic dental consultation into prenatal consultations in order permit the sensitization of these women, screening and management of their oral conditions.

Key messages:

- Oral diseases of pregnant women are a reality without their knowledge in Côte d'Ivoire.
- A systematic dental visit is essential during prenatal consultations in Côte d'Ivoire.

Antenatal care initiation in an ethnically dense socially disadvantaged maternal cohort

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Background:

Differential utilisation of antenatal care among ethnic minority mothers is a contributor to their increased risk of poor birth outcomes in developed countries. Links between ethnicity, area deprivation and the timing of antenatal care initiation remain poorly understood. This study investigated patterns of antenatal care initiation among an ethnically dense, socially disadvantaged maternal cohort.

Methods:

We conducted a retrospective analysis of routinely collected anonymous data of live singleton births in a maternity unit serving an ethnically diverse population. We applied univariate regression models to examine the association between late antenatal care initiation and various predictor variables in particular ethnicity and area deprivation.

Results:

Gestational week at antenatal initiation was available for 46, 089 births. One fifth (20.9%) of mothers initiated antenatal care after 12 weeks of gestation including 11.9% who had their first antenatal appointment at 13 -20 weeks (moderately late) and 8.9% who had it later than 20 weeks (extremely late). Among all the factors considered, late initiation was most strongly associated with non-White British ethnicity. Black African (34.2%) and Black Caribbean (29.0%) mothers were more than twice as likely to initiate antenatal care after 12 weeks of gestation compared to White British mothers [Odds ratio (OR) = 2.69 and 2.15 respectively). The odds did not increase with increasing area deprivation except for moderately late initiation in the most deprived and second most deprived areas [unadjusted OR = 1.54 and 1.24 respectively].

Conclusions:

Non-White British ethnicity was the key predictor of late antenatal care initiation in our ethnically dense socially disadvantaged maternal cohort. Impact: Programs and policies should take in to account ethnic variations in antenatal care initiation while designing programs and policies to improve birth outcomes in ethnically dense socially disadvantaged areas.

Key messages:

- Non-White British ethnicity was the key predictor of late antenatal care initiation.
- Area deprivation per se appeared to have limited association with late antenatal care initiation.

Sequence of cigarette and e-cigarette initiations and daily smoking in adolescents (HBSC 2018)

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Background:

Electronic cigarette may help adults quit smoking. For adolescents, the concern is whether e-cigarette initiation is a gateway to subsequent smoking. Our objectives were to describe the sequence of conventional cigarette and e-cigarette initiations among adolescents who had already used both products, and to analyse the current smoking behaviour according to the first experienced product.

Methods:

Analyses were based on a two-stage random sample of 9,937 12-20-year-old adolescents included in the French-speaking Belgian 2018 Health Behaviour in School-aged Children cross-sectional survey. Cigarette and e-cigarette initiations and its sequence, current daily smoking and other characteristics were collected through a self-administered questionnaire. Associations, adjusted for demographic data, were estimated using logistic regression and weighted. Sampling design was considered in analyses.

Results:

In 2018, 66.0% of adolescents reported never having tried a cigarette and e-cigarette, 8.1% having experimented cigarettes only, 9.2% e-cigarette only and 16.6% having experimented both. Among adolescents who tried both products, eight out of ten smoked cigarettes before trying the e-cigarette (78.2%). In the whole sample, 6.8% of adolescents were smoking every day. Daily smoking was observed in 19.8% of adolescents who initiated e-cigarette and cigarettes and in 6.4% of those who initiated cigarettes only. Adolescents who first smoked cigarettes were more likely to further smoke daily (aOR: 2.48 [1.69-3.64]) than those who first used e-cigarette. The risk of daily smoking was not different between adolescents who first used e-cigarette compared with those who tried cigarettes only (aOR: 1.23 [0.76-2.00]).

Conclusions:

In French-speaking Belgium, conventional cigarette was the first step in the initiation and continuation of tobacco smoking. These findings help understand smoking patterns among adolescents and will support the development of smoking prevention strategies.

Key messages:

- Our findings suggest that health promotion interventions should remain focused on conventional cigarette.
- Based on a cross-sectional study, they should however be confirmed by prospective studies.

Adolescent health literacy in 3 European cities and its association with smoking and smoking beliefs

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Background:

Beliefs about smoking have been found to be associated with smoking behaviour. Similarly, health literacy (HL) as a competence to make health-related decisions has been identified as an independent factor to explain differences in smoking. However, little is known about adolescents' HL in different countries, and how HL is associated with health behaviour and health-related beliefs. The aim of this study is to describe the levels of HL in three European cities, and how HL is associated with smoking and beliefs about smoking consequences.

Methods:

In 2016 as part of SILNE-R study, 5,088 adolescents aged 14 to 16 years answered a school survey in Amersfoort (NL), Hanover (GE) and Tampere (FI). Health Literacy for School-aged Children (HLSAC) covering five components (theoretical knowledge, practical knowledge, critical thinking, self-awareness and citizenship) was used. Questions on smoking and five statements on beliefs about smoking consequences were asked. The analyses were conducted with multinomial logistic regression, and with generalised linear mixed models.

Results:

HL was the highest in Tampere (Finland), then in Amersfoort (the Netherlands), and the lowest in Hanover (Germany). HL was not associated with smoking, but it was positively associated with beliefs about smoking consequences, overall and when stratified by city.

Conclusions:

Health literacy level was the highest in Tampere (FI), which may be due to Health Education as a curriculum-based school subject. In other cities, the education on health is not offered so systematically. Highly health literate students also know more about smoking consequences, but it does not affect their smoking behaviour. Systematic and compulsory health education in schools can be recommended in order to enhance adolescents HL.

Key messages:

- Adolescents' high health literacy was associated with more accurate believes on smoking consequences.
- Health literacy was not associated with smoking behavior.

Socio-demographic and lifestyle determinants of the micronutrients status during pregnancy

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Micronutrients status during pregnancy is recognized as one of the environmental factors that can have an impact on maternal and children's health. The study aims at evaluating socio-demographic, lifestyle, environmental, and pregnancy-related determinants of maternal micronutrients status during pregnancy.

The analysis was based on data from the Polish Mother and Child Cohort (REPRO_PL). During the second trimester of pregnancy, 1306 women filled in a modified version of the validated food frequency questionnaire (FFQ) based on which the intake of the following micronutrients was estimated: calcium, magnesium, zinc, copper, selenium, folate, vitamin D, vitamin A and vitamin E. In addition, copper, zinc and selenium levels were measured in the blood collected during the second trimester of pregnancy.

About 95% of the women took dietary supplements during pregnancy. Despite such supplementation in the case of a high proportion of the women the intake of majority of the analyzed micronutrients was below recommendations for the pregnancy period (based on the Estimated Average Requirement). The mean plasma zinc, copper and selenium concentrations were 0.9 ± 0.3 mg/l, 2.0 ± 0.6 mg/l and 48.4 ± 10.5 ug/l, respectively. The chance to reach the recommended intake for vitamin A, vitamin D and selenium was higher among the multiparous women ($OR = 1.53$ $p = 0.007$; $OR = 1.44$ $p = 0.02$; $OR = 1.48$ $p = 0.009$) and for zinc among the women with a higher socio-economic status (SES) ($OR = 1.43$ $p = 0.04$). For other variables the results were not statistically significant. A higher selenium level in the plasma was observed among the older women ($p = 0.01$) and those with a higher SES ($p = 0.03$).

The current study presents evidence on specific factors influencing the micronutrients intake. They need to be accounted for in educational programs and interventions that focus on healthy diet recommendations during pregnancy.

Key messages:

- In the case of a high proportion of the women the intake of majority of the analyzed micronutrients was below recommendations for the pregnancy period.
- More effort should be taken to educational programs and interventions that focus on healthy diet recommendations during pregnancy.

Participatory research in the field of early childhood interventions - how can this be achieved?

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The Austrian early childhood interventions programme (‘‘Frühe Hilfen’’) is an overall concept of health promotion measures, aiming to support families depending on their individual needs to create good conditions for raising their children. This should contribute to long-term health of the children. The manifold effects of this complex intervention on the families are to be investigated in the future. To do so, a research concept shall be developed using a participatory research approach. A selective literature search was carried out to identify concrete recommendations for participatory research and previous experiences on the participation of parents. Based on these results, semi-structured interviews and group discussions with families were carried out. According to literature, parents have rarely been used as co-researchers. Our experiences show that access to families in burdened life circumstances is possible via the low-threshold structures of our early childhood interventions programme. In 2018, 21 families participated in interviews and group discussions. The latter method is particularly well suited for obtaining targeted information from families and building trust for long-term cooperation. Still, the stressful family situations make it difficult to participate in research activities. Therefore, specific conditions are required. At present, it is clear that it is feasible to involve families and test research methods together. The next step, an equal cooperation of families and researchers, shall be achieved by the use of a research group. A small group started in Spring 2019, eventually being involved in the implementation of some methods during fall 2019. Whether families are willing to participate continuously for a long time in research activities remains unclear, so far.

Key messages:

- Participatory research with families in stressful situations needs time and patience as well as specific conditions, but it is possible.
- Participation of the target group in the planning phase of further research can lead to relevant insights for programme improvements.

The role of health literacy in explaining regional health differences among adolescents

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Background:

Health disparities in adolescence track forward to adulthood. In understanding disparities better, health literacy (HL) - as a broad range of health-related competencies - has been identified as a valuable construct. Higher HL has been associated with better health outcomes, also among adolescents. Not much is known about how language or region in a bilingual country is associated with HL, or how HL is associated with regional health disparities. The aim of this study, in a bilingual country, was a) to examine and compare HL and health levels among majority and minority language speaking adolescents in different regions of Finland, and b) to explore if HL explains possible regional health differences in these two language groups, taking into account other important structural stratifying factors.

Methods:

The data of 13- and 15-year-olds were obtained from the Health Behaviour in School-aged Children study, conducted in Finnish- and Swedish-speaking schools in Finland in 2014 (N = 3853/1123; 85/83%). HL was measured with the HLSAC-instrument. The data were analysed by logistic regression and interaction analyses.

Results:

In the total sample, 23% rated their health as excellent; 33% had a high and 10% a low HL. The preliminary findings showed no differences in health or HL between the language groups. However, regional health differences were found in both language groups: in the Finnish-speaking sample among boys, and in the Swedish-speaking sample among girls. Findings also showed regional differences in HL levels in both language groups, especially among the Swedish-speaking minority group. Comprehensive HL was an independent factor in explaining these regional health differences.

Conclusions:

This study adds to prior studies on the role of HL as a modifiable health resource by showing that in addition to other structural stratifying factors comprehensive HL explains regional health disparities among adolescents in a bilingual country.

Key messages:

- This study in a bilingual country found regional health disparities and regional differences in HL levels among both majority and minority language speaking adolescents.
- In both language groups, taking into account other important structural stratifying factors, comprehensive HL was an independent factor in explaining the regional health differences.

Adolescents' use of an online question-answer service to gain health knowledge

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Background:

Adolescents prefer to collect information online. However, research has also shown than adolescents lack competency in googling information. Furthermore, boys are less likely than girls to seek help and to discuss their problems. Hence, an online information and question-answer (QA) service staffed by professionals, like ung.no, may provide what adolescents desire. The ung.no QA service is open to ages 13-20, and all questions and answers are publicly available in a searchable database.

The aim of the present study is to investigate who the users of the ung.no QA-service are and what their main concerns are.

Methods:

Data consisted of all questions posted to ung.no 2016-2018. Descriptive analyses were performed using categorization of questions established by ung.no.

Results:

The data consisted of N = 128 289 questions. Overall 68.5% of questions were posted by girls ($p < 0.01$). The gender option 'other' was chosen by 1.7%. Younger adolescents aged 13-16 posted 66.1% of the questions ($p < 0.01$). The age imbalance was most pronounced among girls. The age distribution suggests that users <13 and >20 present themselves as 13- and 20-year olds respectively. Three categories contained 80% of questions, these concerned: body and health (48.1%); school and education; and friends and love. While 52.4% of girls' questions concerned body and health, boys' questions were more evenly distributed among categories. Boys had, relatively, more questions regarding laws and rights, intoxicating substances and school, education and work.

Conclusions:

Analyses reveal that 7 out of 10 users of the ung.no QA service are girls, and that the main area of concern is body and health. Results indicate a need for this QA service for wider age-range. The outreach of the ung.no QA service is universal, and hence has great potential public health impact. The results call for action identifying ways to reach boys and in turn efface gender inequality in help seeking behaviour and improve public health.

Key messages:

- Seven out of 10 users of a public digital QA service for adolescents ages 13-20 are girls, and seven out of 10 are in the youngest age group 13-16.
- The main areas of concern posted to a public digital QA service are regarding body and health, and school and education.

Abriendo Futuros: An empowerment program for indigenous adolescent girls in Yucatán, Mexico

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Background:

Abriendo Futuros is a a girl-centered empowerment program that engages community leaders and trains older indigenous girls as mentors to run community girls' clubs, known as safe spaces. Mentors work directly with indigenous girls to deliver program curricula tailored to the girls' specific and unique needs to builds girls' assets in areas such as sexual and reproductive education, gender equality, violence prevention, leadership, financial education and healthy lifestyles.

Objectives:

The program aims to improve critical health, social, and cognitive skills that help girls have a voice and choice in their lives and allows them to draw the path to a healthy adult life, overcoming the risks present in their context. The program was implemented in 8 rural communities in the south of Yucatan. A total of 657 girls were enrolled over the 18-month-implementation period (2015 - 2017).

Results:

A quasi-experimental evaluation was implemented in 11 communities (8 intervention and three control). Preliminary findings, using the Propensity Score Matching technique, suggest significant positive effects on intermediate outcomes such as financial literacy, attitudes towards gender norms, sexual reproductive health knowledge, social capital, and perceived exposure to physical violence. No statistically significant results were achieved in main outcomes (reduce adolescent pregnancy and school dropout). We associate this, mainly to the fact that the intervention was only at an individual level, but also to the limited sample size and the brief observation period (18 months).

Conclusions:

Girl-centered programming increases access to spaces where girls meet to expand their knowledge and social networks and build assets that reduce their risks and broadens their opportunities. However, further evidence is needed on multi-level and multisector girl-centered interventions to address teenage pregnancy and other complex issues.

Key messages:

- The program generates a social safety net among girls and mentors that is key to the well-being of girls.
- Girl-centered programs have positive effects on girĺs empowerment for girls who live in vulnerable situations and unequal social contexts.

Barriers and enablers for practicing kangaroo mother care (KMC) in rural Sindh, Pakistan

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Background:

More than 2.5 million newborns die each year, contributing to 47% of under 5 mortality worldwide. Globally, Every Newborn Action Plan has emphasized on Kangaroo Mother Care (KMC) as an essential component of neonatal health initiatives. An international joint policy statement and endorsement from health professional associations also recommended practicing KMC for newborn care.

Methods:

We conducted a qualitative study with 12 in-depth interviews (IDIs) and 14 focus group discussion (FGD) sessions, in two health facilities of Sindh, Pakistan during October-December 2016, to understand the key barriers and enablers to a mother's ability to practice KMC and the feasibility of implementing and improving these practices.

Results:

Our study findings revealed that community stakeholders were generally aware of health issues especially related to maternal and neonatal health. Both the health care providers and managers were supportive of implementing KMC in their respective health facilities as well as for continuous use of KMC at household level. In order to initiate KMC at facility level, study respondents emphasized on strengthening of availability and quality of services as well as training of health providers as critical prerequisites. Also in order to continue practicing KMC at household level, engaging the community and establishing functional referral linkage between community and facilities were focused issues in facility and community level FGDs and IDIs. The study participants considered it feasible to initiate KMC practice at health facility and to continue practicing at home after returning from facility.

Conclusions:

Ensuring facility readiness to initiate KMC, improving capacity of health providers, coupled with strengthened community mobilization, and targeting specific audiences may help policy makers and program planners to initiate KMC practice at health facility and keep KMC practice continued at household level.

Key messages:

- Introducing KMC at health facility followed by continuing practice at household level is feasible, even in a religiously conservative setting like Pakistan.
- Facility readiness, improved health workers' capacity coupled with strengthened community mobilization targeting specific audiences could help scaling up this public health intervention in Pakistan.

How adolescents use an online question-answer (QA) service to address their mental issues

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Background:

Ung.no is Norway's largest information website directed at adolescents, with more than 800 000 users per month. Ung.no offers an online QA service in which 13-20-year-olds post their questions and get answers from professionals. Anonymous answers are publicly available online. Descriptive analysis of over 125 000 questions written to ung.no from 2016-2018 showed that most adolescents asked questions about body and health. Subsequent qualitative content analyses of the body-and-health-questions showed that mental health is one of the most prominent topics in the adolescents' questions. The aim of the present study is to investigate how adolescents use the QA service to address mental issues.

Methods:

A random selection of 360 questions - stratified by age and gender - concerning body and health were made. The questions were analysed by use of a qualitative thematic analysis with a functional textual approach, i.e. examining the questions' linguistic functions.

Results:

In the sample, 20 % of the questions concerned mental issues, ranging from negative feelings of sadness, fear or anger, to disorders such as psychosis and depression and grave issues such as suicidal thoughts and self-harm. Three main functions of the adolescents' questions were identified: 1) Telling about their troubles for the first time; some of them did not ask a question in their post, they just described their feelings; 2) Asking what to do when nothing else has been of help and 3) Seeking confirmation of information they have already received from health experts, teachers, parents or friends, or read on the internet.

Conclusions:

A low threshold service such as an anonymous QA service seems to be useful for adolescents when they need and want to tell about their mental issues or seek help, often for the first time. The outreach of the ung.no QA service is universal, and hence has great potential public health impact.

Key messages:

- Adolescents use a low threshold online QA service to address a wide range of mental problems.
- Adolescents use a low threshold online QA service to tell about their mental issues for the first time.

The role of maternal psychological control and pressure on body image in a child's drive for thinness

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Background:

The drive for thinness (DFT), an indicator of disordered eating, is strongly predicted by body dissatisfaction (BD). In early adolescence, there are other predictors of DFT which rise from the mother-child relationship such as maternal psychological control (PC) and the motheŕs pressure on the child's body image (MP). The explanation of DFT by the child's self-perception of BD and PC as well as the mother's perception of

MP among early-adolescent boys and girls has great importance for public health and is therefore the aim of this study.

Methods:

The research sample consisted of 191 Slovak adolescents (53.4% of girls, Mage = 12.54, SD = 0.58) who completed the Children's Body Image Scale, DFT subscale of Eating Disorders Inventory, Psychological Control Scale-Youth Self-Report; and their mothers (Mage = 40.45, SD = 4.71) who completed the Parental Influence Subscale. Structural equation modelling was performed.

Results:

A hypothesized model was tested to explain DFT by PC and BD, associated with four sources of MP. The tested model did not fit the data well enough. A modified model, where three insignificant sources of MP were excluded, fitted the data well (SRMR = .06, CFI = .95, RMSEA = .04, PCLOSE = .74) and explained 22% of the variance in DFT. The model was statistically equivalent for both genders. DFT was associated with BD ($\beta = .42$; <.001), PC ($\beta = .2$; <.05) and indirectly with the source of MP - child's body image preoccupation (CBI) ($\beta = .15$; <.05), through BD. CBI was associated with BD ($\beta = .27$; <.05).

Conclusions:

The results point to the importance of BD, PC and CBI - a factor reflecting mothers direct pressure on the child's body image, in explaining DFT among early adolescent boys and girls. Other sources of MP (reflecting the mothers concern about her own body image) were not significant in this context. BD and disordered eating prevention strategies for adolescents indicate a respectful mother-child relationship, avoiding pressure and control.

Key messages:

- A mothers direct pressure on child's body image, psychological control and body dissatisfaction are significant in explaining the drive for thinness among early adolescents.
- Body dissatisfaction and disordered eating prevention strategies for adolescents indicate a respectful mother–child relationship, avoiding pushing a child to think, feel, or act as the mother wants.

Employment and health of working parents: a joint effort to uncover hidden treasures in birth cohorts

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Birth and child cohorts include a wealth of valuable and under-utilized data on employment and health of parents during pregnancy, at birth and often at one or more follow-up assessments.

OMEGA-NET is a EU COST Action aimed at creating a network to optimize the use of European occupational, industrial and population cohorts and to promote health research on occupation and employment. Within this network, Task Group 3.3 is exploring the possibility of exploiting birth cohort data to investigate the interplay between health, socio-economic conditions, working life and work participation of parents around and after the birth of their children, identify gaps in knowledge, and devise strategies to fill them.

Using a web-based database, www.birthcohorts.net, we have identified cohorts with occupational and health information in up to 200,000 parents. Out of 47 cohorts with information on mothers, maternal employment status and occupational exposures during pregnancy were recorded in 18 and 35 cohorts, respectively. For paternal exposures, the corresponding numbers were 6 and 15. To exploit these data, many challenges have to be overcome, primarily harmonization of exposures and outcomes. Cohorts cover different time periods and geographical regions, which can be at the same time a challenge and a blessing, providing hints on causal effects and mechanisms. Other strengths of pooling birth cohorts include the life-course nature of data and the possibility to investigate neglected occupationally-related exposures like work-family conflicts and their effects on health.

We argue that parental data collected in birth cohorts are a valuable under-exploited source of information that would allow cross-national comparisons of the relationships between work, career trajectories and health of young parents.

Key messages:

- Birth cohorts hide a treasure of occupational and health information of young working parents.
- OMEGA-NET has plans to dig them out to investigate their interplay.

How early childhood services address health inequalities and child wellbeing in France

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Early childhood (0-6 years old) is a key period when talking about health inequalities (HI) and child wellbeing. Over the past decades, research has shown the importance of early investment. In France, early childhood is a period covered by different public policies and different stakeholders from different sectors, i.e. health, education, childcare facilities, social affairs, recreational activities, etc. Both coverage of 0-6 years and intersectorality, are rarely connected in the literature. Based on Bronfenbrenner ecological approach, the Récits project aims to better understand how issues related to HI and child wellbeing are addressed at a local level within local policies as well as by professionals from the different sectors. It also aims to better understand the relations established by families with those professionals.

Two French départements are studied: Allier (03) and Ille-et-Vilaine (35); both are characterised by social and spatial HI. Within these departments, two local authorities were selected as case studies for in depth analysis: secondary analysis of social and health indicators are carried out and qualitative data are gathered through the collection of institutional documents, observations and interviews with local decision-makers, professionals and families.

First results, focusing on local public policies and how they are implemented by local stakeholders, highlight the diversity of the strategies developed according to the local social context and to the sector. Partnership between the different sectors is valued in policies however the way they work varied, notably, depending on the history of the collaboration.

By clarifying the issues related to the articulation between public policies, local interventions and individual and collective practices of early childhood professionals, this research will contribute to improve and develop strategies to reduce HI and support children and families with respect to their expectations.

Key messages:

- Thanks to its ecological and intersectoral approach, this project will highlight how early childhood services may contribute to tackle health inequalities and to improve child WB.
- Addressing the complexity of the interactions between public policies, professionals and families will lead to a better understanding of the current challenges crossing the field of early childhood.

Maternal characteristics in childhood and smoking at age of 15: Findings from the Czech Republic

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Objective:

Maternal employment has been shown to influence child's health, cognitive and behavioural outcomes. There is only a limited number of studies in Central Europe investigating the impact of parental employment on the uptake of smoking in children. The aim of this work is to look at the influence of maternal employment over the whole period of childhood of their children, and other maternal social and behavioural characteristics on the uptake of smoking among children aged 15 in the Czech part of European Longitudinal Study of Pregnancy and Childhood (ELSPAC).

Methods:

There were 971 individuals with complete data on smoking behaviour at age of 15, pattern of maternal employment between child ages 3 and 15, and other covariates including gender, maternal age, maternal education and marital status, household income, and maternal smoking. Logistic regression was used to analyse the association between maternal employment and smoking in their children.

Results:

37% of adolescents aged 15 years reported trying cigarette more than once. Preliminary results suggest that those whose mothers were in paid work were more likely to be smoking at age 15. When stratified by maternal education, the association between maternal employment and smoking was particularly strong among university educated mothers. Those whose mothers were never employed were 4-times more likely to smoke than those whose mothers were continuously employed between ages 3 and 15. The association between maternal employment and smoking was weaker in other strata of maternal education.

Conclusions:

Although maternal employment might have only a limited role in development of smoking behaviour of young adolescents, the association between maternal employment during childhood and young adolescents' smoking does exist and is particularly strong among those with university educated mothers.

Key messages:

- More than one third of Czech adolescents self-reported repeated attempt to smoke cigarettes or cigars or pipe at the beginning of new Millennium.
- Data suggest that adolescents whose mothers had not been employed were more likely to smoke than those of employed mothers.

Supporting child development to reduce child health inequalities in Belgium: a realist evaluation

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Background:

Reducing social inequalities in child health is a major challenge in Belgium. In Brussels, 40% of children are born in a household below the poverty line. The most efficient way to reduce social inequalities in health is to address them on a structural level, via public policies that improve families' income. But it is also proven that direct support of child development can reduce the risk of poverty in adulthood. Therefore, this study focuses on fields projects working directly with families living in poverty and aims to understand how, for whom and in which circumstances their actions can have effects on child's development.

Methods:

We conducted a realist evaluation of 30 field projects funded as part of the fight against child poverty and offering parenting support from prenatal period to the age of 6. Firstly, focus groups with the projects' workers were conducted to identify the underlying mechanisms in their interventions and the contexts facilitating or hindering these mechanisms to achieve the desired effects. Secondly, these Context-Mechanisms-Outcomes (CMO) configurations are validated with project beneficiaries through semi-directed interviews, using picture telling.

Results:

Despite the diversity of the actions carried out, common and transversal mechanisms are highlighted within 6 different CMOs that allow us to understand how and for whom those 30 projects work. Certain contexts - e.g. the characteristics of families, their feeling of freedom regarding the project, the density of projects network - can activate or hinder the mechanisms. We also note that workers tend to adjust their actions to support very vulnerable families for whom certain common mechanisms aren't working.

Conclusions:

This study, co-constructed through the collaboration of researchers and actors, could help workers to better understand and improve the mechanisms induced by their interventions, and stakeholders to recognise which projects are best suited to certain contexts.

Key messages:

- This realist evaluation enables to understand how for whom and in which circumstances field projects actions can have effects on child's development and therefore take part in child poverty reduction.
- The realist approach used in this study, through the parallel evaluation of 30 different field projects, allows to refine hypothesis from one project to another, ensuring transferability of results.

Sickness absence and disability pension in relation to first childbirth: three cohorts in Sweden

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Background:

Childbirth is suggested to be associated with elevated levels of sickness absence (SA) and disability pension (DP). However, knowledge about patterns of SA/DP before and after childbirth as compared to patterns among women who remain nulliparous is limited. We aimed to compare SA/DP across several periods among women with different childbirth status.

Methods:

We analysed three population-based cohorts of all women aged 18-39 years who had not previously given birth and who lived in Sweden on 31 December 1994, 1999, or 2004, respectively. We compared crude and standardized annual mean SA and DP net days during three years preceding to three years after the date of first childbirth, among women having (1) their first and only birth during the subsequent three years, (2) their first birth and at least another delivery, and (3) no childbirths before, nor during the study period.

Results:

Despite an increase in SA in the year preceding the first childbirth, women who gave birth, and especially women with multiple births, tended to have lower levels of SA/DP days throughout the years than women without childbirths. SA/DP days varied across age groups; young women (aged 18-24 years) without childbirths had fewer SA days, but more DP days than their same-aged counterparts who gave birth, regardless of year. These results did not differ across the three cohorts, suggesting that the results were not affected by period effects.

Conclusions:

Women with more than one childbirth had fewer days of SA and DP, as compared to women with one childbirth and to women having no births. Thus, childbirth does not seem to be associated with higher levels of SA and DP. Some of these results can be due to a health selection into giving birth, especially having more births.

Key messages:

- Except for the year before delivery, i.e., when pregnant, women giving birth had fewer SA and DP days than women with no births. Thus, childbirth does not seem to be associated with higher SA and DP.
- Women who had more than one childbirth had less SA/DP days than those with one childbirth.

Factors associated with the use of non-pharmacological analgesia for labor pain management

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Background:

For a decade, pain labor management has evolved: if neuraxial analgesia remains the gold standard, non-pharmacological methods are developing. We aimed to identify individual and organizational factors associated with the use of non-pharmacological analgesia, combined or not with neuraxial analgesia.

Methods:

Women who attempted vaginal delivery with labor analgesia were selected from the 13,147 participants of the 2016 National Perinatal Survey. Labor analgesia was studied as follows: neuraxial analgesia only (NA), non-pharmacological analgesia only (NPA) or neuraxial and non-pharmacological methods combined (NA+NPA). Associations between individual and organizational characteristics were studied using a multilevel multinomial logistic regression.

Results:

Among the 9 231 women included, 62.4% had NA only, 6.5% had NPA only and 31.1% had NA+NPA. Both NPA and NA+NPA were associated with multiparity with antenatal classes, educational level $\geq$ 5 years post graduate, antenatal preference to deliver without NA, and delivery in public maternity units. The use of NPA only was positively associated with non-permanent availability of the anesthesiologist and with a high number of midwives per shift in maternity units. Contrastingly, NPA only was negatively associated with foreign nationality and oxytocin use for induction or augmentation of obstetrical labor. NA+NPA was positively associated with primiparity with antenatal classes, but negatively with inadequate prenatal care.

Conclusions:

Less than 40% of parturients used non-pharmacological analgesia during labor and for the most of them as complementary methods to neuraxial analgesia. NPA and NA+NPA were associated with individual characteristics as well as characteristics of management of labor and organization of maternity units. Non-pharmacological analgesia appears to be dedicated to high educated and well-integrated women in perinatal health care system.

Key messages:

- Less than 40% of parturients used non-pharmacological analgesia during labor and for the most of them as complementary methods to neuraxial analgesia.
- Non-pharmacological analgesia appears to be dedicated to high educated and well-integrated women in perinatal health care system.

Vaccination of classmates for an immunosuppressed child's protection in a school in the LHA Roma 1

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Issue/problem:

One of the duty of a State is to guarantee the protection of the health of all citizens, both safeguarding the sick individual needing care and protecting the healthy individual. An important objective of the vaccination prevention programs is to protect people most at risk of contracting infections because of their health conditions.

Description of the problem:

In April 2019 the District 14 of Local Health Autority Roma 1 was asked by a father of an immunosuppressed child (6 years old), worried about infectious diseases, to verify the safeness of his child school attendance (the first class of primary school). First, a list of the class mates was asked to the school, in order to check their vaccination status by interrogating the web based regional vaccination register. Then, the District asked to the school to plan a meeting with classmates' parents and teachers, in order to inform about the importance of a complete immunization both for the classmates and the immunosuppressed child protection.

Results:

Preliminary results show that, among 18 classmates, 77.8% had full vaccination coverage for the second dose measles and fourth dose whooping cough (not mandatory for children aged less than 7 years), 22.2% were immunized for chicken pox. Among the parents attending the meeting, 15 agreed to complete their children vaccination cycle, all the teachers agreed to undergo whooping cough and chicken pox vaccination in order to allow a safe school attendance to the immunosuppressed child. Parents and teachers were given an appointment in a vaccination center for the week following the meeting.

Lessons:

It is important to promote a real 'vaccination culture' starting from the school, in order to develop greater citizenship awareness about the potential of vaccinations and to contrast fake news and ignorance leading to dangerous prejudices.

Key messages:

- The active collaboration between institutions (sanitary and school) allows, through the integration between different competences, to achieve health objectives to protect the community.
- Talking to pupils' parents about infectious diseases and their prevention makes it possible to increase knowledge and therefore awareness of the importance of adult and children health protection.

Health and well-being of parents with 4-year-old children – a nationwide study in 2018 in Finland

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Background:

A nation-wide data collection on small children and their families' health and well-being has been lacking in Finland.

The aim of this study was to examine health and determinants of health among parents with a four-year-old child.

Methods:

A nation-wide study for 4-year-old children (N = 8720) and their parents (N = 10 737) conducted in 2018. The families were recruited by public health nurses at child health clinics. Both parents had a possibility to answer a questionnaire considering questions on health, well-being and service use. General health of the parent was measured by one question (How do you find your general state of health?), depressive disorders by PHQ-2 and mental health by MHI-5. Data were analyzed by cross-tabulation. Results of logistic regression will be presented in the conference.

Results:

Most participants were female (72%) and most families had two adults (93%). Mean age was 35 years and 58% were highly educated. Around 10% reported their health as average or poor, 19% had had depressive disorders within 12 months, and 6% had experienced mental distress. Single parents reported mental distress and depressive disorders significantly more often than the other parents. Average or poor health was reported significantly more often by female parents. Those with average or poor health or depressive disorders were significantly more likely to have one child, upper secondary education or less, or be outside of work. They felt themselves significantly more often lonely and unsatisfied with their life and family's economic situation. They were also significantly more likely to report need of support for their own parenthood and partnership.

Conclusions:

Health challenges among the parents were quite similar than those among the adults in same ages. However, detailed analysis is needed to find out the specific determinants affecting the parents and whole family's life to be able to better support the families.

Key messages:

- Most parents with children aged 4-year-old were healthy and satisfied with their life.
- The parents having poor physical or mental health had also challenges in family life.

Umbilical cord care through community-based distribution of chlorhexidine in rural Sindh, Pakistan

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Background:

Unsafe practices such as cutting umbilical cord with unsterilized instruments and application of harmful substances, are in practice in many rural areas of Pakistan, and associated with high risk of neonatal sepsis and mortality.

Methods:

We conducted an implementation research in 2015 in Tharparkar district, in Sindh province of Pakistan to understand the feasibility and acceptability of community-based distribution of chlorhexidine (CHX) in rural Pakistan. For this cohort group-only study, 225 lady health workers (LHWs) enrolled 495 pregnant women. Enrolled women received 4% CHX gel and user's instructions for newborn cord care. The LHWs also counseled women on the benefits and correct use of CHX. Study enumerators collected data from CHX receiving women 3 times: at around 2 weeks before delivery, within 24 hours after delivery, and on the 8th day after delivery. We implemented this study jointly in collaboration with Ministry of Health in Sindh province, Pakistan.

Results:

Among enrolled participants, 399 women (81%) received only the first visit, 295 women (60%) received first two visits and 261 women (53%) received all three visits by enumerators. Among 399 women, who received CHX gel, counseling on its use and were respondent to the first round data collection, 78% remembered that the CHX gel to be applied to cord stump and surrounding areas immediately after birth; but less than a third (29%) forgot the need to keep the cord clean and dry. Among 295 respondents in the first two rounds of data collection, who delivered at home, 97% applied CHX to cord stump on the first day.

Conclusions:

Community-based CHX distribution by LHWs, along with counseling to recipient women, resulted in a high rate of cord care with CHX among newborn delivered at home. Results from this study may help program implementers to consider expanding this intervention for improving newborn cord care on the first day of life in Pakistan.

Key messages:

- Community-based distribution of chlorhexidine for newborn cord care appears as highly acceptable and feasible in rural communities in Pakistan.
- Relevant program policy supporting community-based CHX distribution along with counseling by LHW may help expanding coverage of newborn cord care in rural communities in Pakistan.

A vaccination campaign in a Roma community in Rome: an experience of the Local Health Autority Roma1

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Issue/problem:

About 8,000 Roma and Sinti live in the city of Rome, distributed in 33 settlements. This population is particularly at risk of health problems, due to social marginality and reduced access to health and social services. An important challenge for public health is therefore to guarantee and improve the right to health and the availability of health care. In Italy, a new vaccination law was approved in July 2017 and 10 vaccinations became mandatory for minors attending schools.

Description of the problem:

In 2018 the District 14 of the Local Health Authority Rome1 (LHA Rome1) organized a vaccination campaign for the Roma and Sinti community being in its area. The aim of the campaign was to analyse the vaccination status of children under-18 living in the camp, based on the local police census data, crossed with the web based regional vaccination registry, to offer free vaccination for those without a regular status, in order to allow school attendance.

Results:

Among 109 children living in the targeted Roma and Sinti camp, only 6 (5.5%) had a regular vaccination status according to the Italian law. Two different vaccination opportunity were offered to the community during 2018: a dedicated vaccination session in the local vaccination center, during which 6 children were vaccinated; four vaccination days offered directly at the Roma camp (a total of 53 children were vaccinated). At the end of 2018, the new Police census identified 114 minors resident in the camp instead of 109; of these, 48 (42.1%) had reached a regular vaccination status.

Lessons:

Addressing hard-to-reach communities in order to improve the access to health and social services is one of the LHA objectives. The intervention performed in the Roma camp was also an opportunity to promote the importance of vaccination and to inform the target community about various LHA services, in particular maternal and infant services, including those for Temporarily Present Foreigners.

Key messages:

- The interventions performed straight into communities living in unfavorable health and social conditions are useful to improve the access to health and social services.
- Vaccination of people living in a social marginality is an important challenge for public health in order to guarantee specific protection measures and promoting the right to health.

Sexual behaviour and attitudes among university students in Zagreb

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Background:

Sexual behaviour of youth could have reproductive health outcomes with an impact on individual and general population health. The aim of this study was to determine sexual behaviour and attitudes among first year university students in city of Zagreb, Croatia.

Methods:

Study included 298 first year students (61% of females) of Medical School University of Zagreb and 124 students (75% of females) of Catholic University of Zagreb in academic year 2017/2018. Data were collected by anonymous questionnaire School Health Survey, and analysed by descriptive statistics.

Results:

Significantly higher proportion of Catholic University students have had sexual intercourse comparing to medical students of University of Zagreb (48% vs. 36%, $P = 0.019$). The age of first sexual intercourse for the most of students was from 16-18 years (73% of Catholic University students, and 79% of medical students). Contraception was always used among 54% of Catholic University students, and 67% of medical students, and never used among 11% and 4% of them respectively. Most of the students have gained information about human sexuality from the internet (26% of Catholic University students, and 30% of medical students), followed by friends (18%) and parents (11%) for Catholic University students, and television (25%) and friends (14%) for medical students. Most students expressed the attitude that sex education should be introduced in secondary schools (31% and 36%, respectively), followed by both, in primary and secondary schools (21%, and 30% respectively). Fourteen percent of Catholic University students and 7% of medical students thought that sex education should not be introduced to schools.

Conclusions:

Results showed risky sexual behaviour of university students, especially Catholic University students, indicating the need of continuous education on reproductive health among youth.

Key messages:

- Results indicate the need of intervention and continuous education on reproductive health among university students in Zagreb, Croatia.
- Results showed insufficient use of contraception especially among Catholic University students indicating the need of education on reproductive health among medical and nonmedical students.

How do male students perceive their role in contraception and the protection against STDs?

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Background:

A lot of research has been done on women and contraception. How men perceive their role regarding contraception is largely unknown. Previous research shows that factors like intentions, communication and knowledge are of importance. The aim of this study is to get more insight that could provide us with more starting points for preventing unwanted pregnancies and STDs.

Methods:

Eight semi-structured interviews with male students from Amsterdam, The Netherlands (aged 18-25, different study programs) were conducted based on a, previously developed, topic list. Convenience sampling was used to select respondents. The interviews were processed with thematic content analysis. Open, axial, and selective coding was used to analyze the interviews.

Results:

Four themes emerged from the data: openness of parents, making an informed decision, prevention of pregnancy and STDs and durance of relationship. Men do not have a clear view on their role in contraception regarding responsibility and are still struggling with the autonomy of their partner, also in relation to the length of the relationship. When in a relationship they feel their role should be to support and communicate with their partner, but not to make the final contraceptive choice. When not in a committed relationship, men feel their role is solely to protect themselves against fatherhood and, to a much lesser extent, STDs.

Conclusions:

Communication is key in preventing unwanted pregnancies and STDs, and working towards a shared responsibility. Following up on the role of parents in communicating well about these subjects, both men and women should take their responsibility in communicating. Furthermore, fear of unwanted pregnancy seems much larger than fear for STDs for male students. These subjects can be addressed in a university institutional context in a variety of ways (f.i. via flyers, projects, student counselors, student health services).

Key messages:

- More attention for the role of both men and women in communicating about contraception and STDs is necessary in a student population within the university institutional context.
- More attention for the dangers of STDs and the importance of protection against STDs is necessary in a student population within the university institutional context.

What are the determinants of body image distortion and dissatisfaction among Tunisian teenagers?

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Background:

Body image (BI) is considered as central to many aspects of human functioning including emotions, thoughts, behaviors and relationships. This study aimed to investigate the prevalence and the main determinants of distortion and dissatisfaction among teenagers.

Methods:

This was a cross-sectional school-based study using a self-administered questionnaire, conducted among a randomized sample of 1300 school-adolescents in Southern Tunisia, 2018. BI perception was assessed by the Stunkard Figure Rating Scale.

Results:

Among 1210 respondents (93%), BI distortion and dissatisfaction prevalence were 44.8% and 42.4%, respectively. Multivariate analysis showed that 16-18 years age group (Adjusted Odds Ratio (AOR) = 1.28; $p = 0.046$), low family financial situation (AOR = 1.88; $p = 0.014$), as well as high frequency of eating pasta (AOR = 1.3; $p = 0.04$) and fast-food consumption (AOR = 1.7;p = 0.042) were independently associated with under-estimated BI. Skipping breakfast (AOR = 1.9; p = 0.017) and having one obese parent (AOR = 1.9;p = 0.01) were independently associated with higher frequency of over-estimated BI. For BI dissatisfaction, independent factors associated with desire to lose weight were female gender (AOR = 1.53; p = 0.007), high family financial situation (AOR = 2.1,p = 0.008) and having one parent obese (AOR = 2.21,p<0.001). Frequent fast-food consumption (AOR = 1.9, p = 0.038) and eating between meals (AOR = 1.57,p = 0.01) were associated with higher desire to gain weight.

Conclusions:

Our study highlighted a substantially high prevalence of BI distortion and dissatisfaction among adolescents. Their determinants included socio-demographic factors and lifestyle behaviors. Increased awareness among parents and public health planners may help adolescents improve accuracy of BI attitudes.

Key messages:

- BI distortion and dissatisfaction are pervasive problems that increased negative affect in adolescents.
- Promotion of healthy lifestyle including balanced diet and physical activity is warranted.

External resources of resilience in association with the alcohol use among early adolescents

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Background:

This study aimed to explore the role of external resources of resilience in explaining the alcohol use in past 30 days among early adolescents.

Methods:

A representative sample of 653 (52.9% girls) early adolescents (mean age =11.72 at T1; mean age = 13.09 at T5) was collected within a five wave repeated measure design with a baseline(T1), 3-month follow up(T2), 6-month (T3), 12-month(T4) and 18-month follow-up(T5). Alcohol use (AU) in the past 30 days was measured by a questionnaire of the international study ESPAD. School support (SS), school activities participation (SAP), home support (HS) and home activities participation (HAP) were measured by the Resilience Youth Development Module and represented external resources of resilience. Respondent's AU (dichotomized: 0-not used, 1-used) served as the outcome variable and external resources of resilience served as the independent variables. Binary logistic regressions were used to analyze the data.

Results:

At T1, SS (95% CI = 0.77-0.96; p<0.01) was associated with lower AU while SAP (95% CI = 1.00-1.36; p<0.05) was associated with higher AU. At T2, SS (95% CI = 0.73-0.94; pα<0.01) and HS (95% CI = 0.70-0.98; pα<0.05) were associated with lower AU. AT T3, no significant association was found with AU and finally at T4 and T5 only HS (95% CI = 0.81-1.00; T4 = pα<0.05), (95% CI = 0.78-0.96; T5 = pα<0.01) remained significantly associated with lower AU at T4 and T5 while controlling for alcohol use at T1. AU increased significantly across the five waves (pα<0.01). Gender differences in AU were found only at T1 (p<0.01) with boys scoring higher.

Conclusions:

The 5 measurement revealed a trend of the external resources of resilience in AU shifting from the school environment to the home environment. Moreover, it seems that SAP is associated with a higher probability of AU through more opportunities for group activities which are often associated with AU.

Key messages:

- School environment plays an important role in explaining AU in younger early adolescents. Home environment plays an important role in explaining AU in older early adolescents.
- The results point to an increasing trend in alcohol use among early adolescents.

Childhood life events and disturbed eating behaviors in a population-based cohort in the Netherlands

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Background:

Adversities such as maltreatment and physical and emotional abuse are recognized risk factors for eating disorders (EDs) in adolescents and adults, but whether such adversities are also associated with eating behaviors in childhood has been less explored. Our aim was to examine whether a wide range of life events can predict emotional overeating and restrained eating in childhood, which are potential precursors of EDs.

Methods:

The study is embedded in Generation R, a prospective population-based cohort. The sample included 4653 children aged 10 years. Emotional overeating was assessed with the Children's Eating Behavior Questionnaire, and restrained eating with the Dutch Eating Behavior Questionnaire. Mothers reported the occurrence of 24 adverse events in their offspring's childhood. Regression analyses were conducted, both unadjusted and adjusted for gender, ethnicity, and parental education and psychopathology.

Results:

Unadjusted models showed that a higher number of life events is associated with more emotional overeating and more restrained eating; effect estimates attenuated slightly in the adjusted model, but remained significant (per 1 more life event: B = 0.05, 95%CI 0.02-0.08; B = 0.04, 95%CI 0.02-0.07, respectively). Particularly, participants who experienced at least 3 life events had high levels of emotional overeating and restrained eating (adjusted model: B = 0.20, 95%CI 0.06-0.33; B = 0.21, 95%CI 0.08-0.33, respectively). The specific maltreatment related life events were not significantly associated with eating behaviors, probably due to low prevalence of these events (n = 149).

Conclusions:

This novel, population-based study shows that early life adversities may predict disordered eating behaviors in childhood. The results are in line with clinical studies on life events and EDs. If the studied eating behaviors are indeed precursors of EDs, these results may offer potential for prevention and early intervention to avoid the development of full-blown EDs.

Key messages:

- Eating disorders account for more than 2% of the global disease burden, thus representing a major Public Mental Health topic in the EU; more and new measures are required for early detection purposes.
- Life adversities predict disordered eating behaviors in childhood, which are considered precursors of eating disorders: early detection of this association may avoid development of eating disorders.

Raising young people's awareness on sexual and reproductive health issues

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Issue/problem:

Despite the high prevalence of sexually transmitted diseases(STIs) and abortions among Greek youth, sexuality education is not yet part of the curriculum of Greek schools and the Greek family is not ready to address these issues with comfort.

Description of the problem:

A ''one-stop information point'' was organized for one week in major cities of Crete Region as part of a community health program, which was funded by the Regional Authority of Crete to address ''Gender Equality in the Region of Crete within 2018-2020''. The project aimed at increasing young people's awareness of sexual health issues using a ''peer education'' approach and a youth-friendly information package. Undergraduate students from health, mental health and social care professions acted as volunteers upon receiving a rigorous 2-day training by sexual and reproductive health experts. The questions to be answered by the project were: ''What are the main concerns of adolescents regarding their sexual health? How much satisfaction could adolescents gain by a ''one stop information point'' and a youth friendly ''information package'' offered by peers?

Results:

Serious information gaps regarding contraception and STI's and a number of stereotypes regarding healthy relations and sexual orientation have been recorded. Gender dysphoria is still an issue that remains unaddressed among young people. A youth-friendly website (LaHeRS Lab) and short videos are now available as part of the project to facilitate young people's access to information. A large social media network of young people interested in sexual health issues has been formed locally and is growing nationally. The intervention was received with satisfaction.

Lessons:

''One-stop information centres'' and ''peer education'' have been an ideal combination to address sensitive issues among young people.

Key messages:

- Knowledge gaps and unsafe sexual practices are prevalent among adolescents.
- Sexuality education should be offered in early school life.

Is school furniture design a contributing factor to low back pain in adolescents?

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Background:

Recent evidence showed that low back pain (LBP) is frequent among youth. Individual etiologic factors are most often associated with musculoskeletal overuse and altered postural control. This study aimed to evaluate the association between school furniture design and LBP in school-adolescents.

Methods:

A cross-sectional study was conducted using a self-reported questionnaire distributed to school-adolescents aged 12-18 years, in Southern Tunisia, 2018. We performed a stratified three-step sample to obtain a representative sample of 1400 subjects.

Results:

The response rate was 87.2% (1221 students). The mean schoolbag weight was 3±1.3 kg. The schoolbag to body weight ratio was 0.05±0.03. The main method of carrying a schoolbag was on both shoulders (57.2%). During the last 3 months, LBP was reported in 391 cases (32%). Multivariate analysis using logistic regression showed that high-school grade was independently associated with LBP (Adjusted Odds Ratio (AOR) = 2.7;95% CI = [1.9-3.7];p<0.001). Classroom furniture and layout design independently associated with LBP included too low seat backrest (AOR = 1.4;95% CI = [1.12-1.87];p = 0.005), too far seat to black(board) distance (AOR = 1.5;95% CI = [1.1-2.2];p = 0.041), schoolbag to body weight ratio ≥10% (AOR = 1.7;95% CI = [1.2-2.4]; p = 0.002) and carrying schoolbag for 30-60 minutes (AOR = 1.48;95% CI = [1.1-2.1]; p = 0.029). Otherwise, carrying school bag by hand (AOR = 0.25; 95% CI = [0.07-0.89]; p = 0.033) was found to be independently associated with lower prevalence of LBP complaints.

Conclusions:

Current design of school furniture is not compatible with the adequate purposed dimensions in students. It increased substantially the risk of LBP, which emphasizes the need for multi-disciplinary approach involving teachers, policy makers and health care professionals.

Key messages:

- School related LBP may threaten the physical performance and the social life of adolescents.
- Revising school environments and radical ergonomic interventions are mandatory.

Prevalence of Italian children living in food insecure households and their health status

Drieda Zace

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Background:

Food insecurity poses a major threat to population's health status. Children, if affected, are particularly vulnerable to the possible sequels of food insecurity. Considering that, we aimed to assess the prevalence of children (born in Italy, from Italian parents) living in food insecure households and the association with their health and socio-economic conditions.

Methods:

The study was conducted from January 2017 to December 2018 in pediatric offices. Parents answered to the 18-items of the Household Food Security Index, 8 of which specifically concern children. Households were classified in 4 categories: very low, low, marginal and high food security, creating then a dichotomized variable (food secure and insecure). Pediatricians answered a dedicated questionnaire on children's health status. We used logistic regression to assess the socio-economic variables predicting food insecurity and chi2 test to evaluate the association between food insecurity and children's health status.

Results:

Based on parents' answers, among 573 households with children, 15.4% were food insecure. Food insecurity was associated to lower parent's education and employment, worse household's economic condition, higher number of children within a family and geographic location (living in south Italy rather than north). There was a significant association between food insecurity and the presence of visual, relational, psychomotor, dental and physical impairments in children.

Conclusions:

Almost 1 Italian child in 7 lives in food insecure households. Children living in food insecure households have higher probability of having physical, mental and social health problems. Considering the impact on children's health, food insecurity emerges as a public health issue and should be addressed through the appropriate measures.

Key messages:

- Food insecurity among children represents a public health issue even in a developed country such as Italy, affecting children's present and future health.
- Policy makers should consider screening children for food insecurity and taking appropriate actions, especially for the at-risk population.

Weight Control Practices in Turkish Adolescents and Factors Related with Over- Weight and Obesity

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Backgrounds:

Over-weight and negative body perception that may develop during adolescence period cause many slimming experiences, especially the diet and as the state of discontent increases, the methods used are more unhealthy and dangerous. This study was conducted to determine the weight control practices and the factors related to over-weight-obesity in Turkish adolescents.

Methods:

This cross-sectional study was conducted with 900 high school students aged between 14-18. The data were collected by using an introductory form including questions about socio-demographic characteristics and weight control, eating attitude test (EAT-26), Bergen Insomnia Scale and height-weight.

Results:

In this study, it was found that 9.1% of the adolescents were overweight, 8.2% of them were obese, and 32.9% of them had a risky eating behavior (EAT-26 score > 20). It was found that 87.7% of adolescents who are overweight-obese and 40% of those with normal weight were wanted to lose weight. It was determined that 70.4% of adolescents exercise for weight control, 63.6% of them increased fluid consumption and 16.6% of them used weight loss dietary supplement. Adolescents who were overweight-obese had a higher proportion of those with a risk of eating behavior (EAT> 20) and those with insomnia problems than those with normal weight ($p < 0.05$). The factors related to overweight and obesity were found in female adolescents; standing snacking, angry negative moods and sometimes consuming irregular meals between meals, whereas in male students; watching TV, working while eating, standing snacking, late-night eating and insomnia ($p < 0.05$).

Conclusions:

It was determined that the majority of overweight-obese students wanted to lose weight and some of those had a risky eating habits and preferred unhealthy methods for weight control. These results indicate that was need programs of healthy weight control and prevention of obesity in the schools.

Key messages:

- Adolescents who were overweight-obese had a higher proportion of those with a risk of eating behavior (EAT> 20).
- There is a need for public health programs on healthy weight control and weight regulation practices for adolescents.

Risk factors of pregnancy morbidity in migrant women from Subsaharan Africa

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Reduction of maternal mortality remains a major public health issue worldwide. In France, the latest national confidential enquiry regarding maternal mortality (2010-2012) stated a ratio of 10 /100 000 livebirths whereas the goal was 5/100 000. The risk of death among pregnant women from Subsaharan Africa (SSA) was 3 times higher.

We performed a monocentric observational retrospective study from 01/01/2009 to 01/09/2016 in order to better understand the factors of maternal morbidity among SSA pregnant women. Demographic characteristics as well as pregnancy outcomes were collected. Antenatal clinics attendance was scored (+1 if positive, +1 if done following the recommended schedule). A total 1 489 (7%) out of 20 755 pregnancies were registred among SSA women. Mean age was 29 years (14-48), mean gestity/parity were respectively 3.5 and 1.8. About 38% of pregnancies occured in overweight or obese women. Obstetrical complications were seen in 542 (36%) pregnancies: gestational diabetes (n = 206, 36,4%), hypertensive disorders (n = 122, 8,2%), 19 had both. Pre-eclampsia represented 4%, sepsis 5%, premature rupture of membrane 5% and post partum haemorrhage 3%. Livebirths was high (97%) with a mean gestational age of 37(22-41), a mean birth weight of 3150g (500-5000). The unique maternal death in this cohort was due to amniotic fluid embolism. Complication risk factors were age (30 versus 28 years; $p < 0.0001$), BMI (26 versus 25 kg/m2; $p < 0.0001$), past history of chronic hypertension and pregestational diabetes ($p < 0{,}001$). Furthermore, the score of antenatal care attendance was low in those who presented pregnancy morbidities ($p = 0.0006$) (adjusted with age, BMI> 25 and chronic hypertension).

Higher risk of maternal morbidity among SSA women is not only explained by individual risk factors but also by a lack of compliance to the recommended antenatal care even if they live in France. Further investigations including sociological studies are therefore needed.

Key messages:

- Maternal mortality and morbidity are higher among migrant women from Subsaharan Africa.
- Our study highlights a non compliance to the recommended antenatal care surveillance among risk factors.

Features of establishment of early lactation in women who gave birth after in vitro fertilization

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Background:

Breastfeeding gives babies the best possible start in life and breastmilk works like a baby's first vaccine. Pregnancy resulting from IVF is often associated with placental insufficiency in which the hormone-producing function of placenta can be compromised that may result in reduced lactogenesis. The aim was to study the emergence of early lactation after IVF in women with a history of infertility.

Methods:

The study involved 34 women after IVF with a singleton full-term pregnancy with a history of tubal-peritoneal infertility. Control group comprised of 47 women with naturally occurred pregnancy. Delivery occurred naturally. All women were assessed for hormonal function of placenta for a period of 16-18, 28-32, and 37-38 weeks of pregnancy. The average daily amount of milk on a 5th day after delivery was measured.

Results:

In the IVF group vs. control group there was a decrease in the production of hormones by the placenta (progesterone, estriol, placental lactogen) preparing the mammary glands for lactation ($p < 0.05$). At gestational age of 16-18 weeks progesterone level in IVF group was 172.2±10.72 nmol/l; 28-32: 274.2±8.45 nmol/l; 37-38 weeks: 343.2±9,1 nmol/l. The level of estriol at 16-18 weeks was 2.87±1.42 ng/ml; 28-32: 10.94±0.6 ng/ml; 37-38 weeks: 25.21±0.22 ng/ml. Placental lactogen at16-18 weeks: 1.15±0.2 nmol/l; 28-32: 6.39±0.69 nmol/l; 37-38 weeks: 7.23±0.59 nmol/l. On day 5 normal lactation was observed in 21(62%) and 43(91.5%) women in IVF and control group, respectively ($p < 0.05$).

Conclusions:

Increased number of cases of hypolactation was observed in women after IVF, which was associated with decrease in the hormonal function of placenta. Women who have given birth to children after IVF require special attention from the side of medical personnel and from loved ones in the early stages of establishment of breastfeeding.

Key messages:

- IVF is a risk factor for hypolactation, which is associated with placental hormone-producing insufficiency.
- Women who have given birth after IVF require support aimed at promotion of early lactation and breastfeeding.

Improving maternal healthcare in Georgia

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Improvement of reproductive health is a worldwide priority. Maternal and perinatal mortality and morbidity are frequently used as measure of quality of the healthcare. Thus, reduction of maternal morbidity and mortality are important goal for the SDGs. Hence, maternal and new-borns health are crucial to report accurately. The key requirement for progress is to have as much precise data as it is possible. Several tools are developed for quality surveillance; among them is the medical birth registry.

Georgia is a developing country which recently had healthcare in transition. Over the last decade, Georgia's health sector has improved quality and embraced evidence-based medicine. Transformation and progress attributed reproductive healthcare. Country elaborated strategic plan and set achievable target for maternal and children's mortality ratios for 2030. Georgia developed national maternal surveillance system. However, country has been lacking precise, comprehensive, and longitudinal data dealing with the reproductive health. Thus far, data on associated health services mainly derived from the sporadic on-demand surveys. Routine info on mortality and morbidity were available as aggregated data with a lack of epidemiological analysis.

In order to provide proper reproductive health profile, Georgia created a nationwide medical birth registry (GBR). GBR has made it possible to create a precise epidemiological analysis and to ensure the evidence-based reporting. To improve epidemiological research capacity, PhD projects were implemented a year after the GBR started operation, in the frame of cooperation of Norwegian and Georgian Universities. Moreover, universities initiated tracks for master students to have internship and graduate thesis in GBR related topics.

Overarching goals of the GBR are numerous. Although compilations of statistics and ensuring scientific bases for advice through generated researches are beneficial for universities and country as well.

Key messages:

- Studies, based on transparency of highly accurate medical statistics gives possibility for effective implementation of evidence-based public health interventions.
- Recommendations provided by registry based studies have a pivotal role in formulation and revision of relevant public health strategies.

Association between maternal factors and appropriate medication for nursery school children in Japan

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Background:

Inappropriate medication use for children by caregivers has been reported in Japan. We focused on the factors which could be associated with health literacy (HL) and knowledge of medication (KM). We aimed to examine the association between appropriate use for nursery school children and maternal socioeconomic status (SES) or behavior related to medication adherence among mothers in Japan.

Methods:

The data regarding the conditions of medication for children (aged from six months to six years old) at home and in nursery school by the online survey from April to May 2019 was used. Maternal SES, such as education, occupational status, and economic conditions, were asked via a self-administered questionnaire. Maternal behaviors were measured using a 5-point Likert scale and classified into two groups. HL and KM were scored and divided into two categories. Appropriate medication use was evaluated using a 5-point Likert scale for the statement "I give my child medicine as per instructions," and the answers were classified into two groups. Poisson regression was employed to investigate the association. Age, maternal SES, chronic disease of children, birth order, HL, and KM were used as covariates.

Results:

A total of 233 (38.8%) of 600 mothers aged 24-48 years, reported appropriate medication use for children. None of the maternal SES was statistically significant. After adjustment, the individuals, who consent to prescribed medications for children, were 2.16 times (95% confidence interval [CI]:1.64-2.86) more likely to use medicine appropriately compared with their counterparts. 'To be able to consult with pharmacists' were also statistically significant (Prevalence Ratio = 2.14, 95% CI:1.63-2.81).

Conclusions:

The mothers, who consent to prescribed medications for children, who consult with pharmacists were more likely to use medicine appropriately. Community pharmacists could support those to improve their skills.

Key messages:

- The maternal behaviors related to adherence were associated with appropriate medication for children among Japanese mothers, although none of the maternal SES was statistically significant.
- Community pharmacists could support mothers and contribute appropriate medical treatment for children.

Screening for celiac disease in school aged children in Croatia

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Background:

Celiac disease primarily affects small intestine and occurs as an immune-based reaction to dietary gluten in wheat, barley and rye. There has been a significant increase in prevalence and an increase in diagnosis rate due to diagnostic tests improvements. Celiac disease can present with gastrointestinal and non-gastrointestinal abnormalities, but also many individuals may have no symptoms at all. Early diagnosis of celiac disease is essential, because untreated disorder may result in serious complications. The aim of this study was to detect celiac disease in asymptomatic school-aged children and to determine prevalence rate.

Methods:

Cross sectional study was conducted on a sample of 2000 children in school year 2018/2019 in school health service. The sample comprised 15.8% of elementary school first grade population in City of Zagreb, aged 6-7 years. SimtomaX in-vitro rapid screening test was used to detect IgA and IgG deamidated gliadin peptide and/or IgA deficiency. Children with positive tests were referred to clinical diagnostic. Data were analysed by descriptive statistic.

Results:

The study comprised 1404 children (51% girls, response rate 70%). Positive result was found in 5.6% children (42 girls and 37 boys). Up to now, celiac disease was confirmed with duodenal biopsy in 0.5% asymptomatic children (3 girls, 4 boys).

Conclusions:

The results of the study showed prevalence of celiac disease of 0.5% in asymptomatic first grade school children. Children diagnosed with celiac disease require gluten-free diet and follow-up of gastroenterologist, nutritionist and school doctor. The results of the study will be used to raise the awareness and encourage more active search for celiac disease among asymptomatic school children.

Key messages:

- Recognition of celiac disease in asymptomatic children reduces risk of complications.
- Adequate diet for individuals with celiac disease should be ensured from kindergarten through school time.

The importance of relationships in adolescent risk behaviour prevention

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Health risk behaviours are a key contributing factor to adolescent morbidity and mortality. Furthermore, evidence shows that health behaviours begun in adolescence can impact on wellbeing across the lifespan. Current evidence suggests it is advantageous to target multiple health risk behaviours simultaneously, however efficacy testing remains the key focal point for research, with few studies exploring common underlying causal and contextual factors which may contribute to the success or failure of a programme.

Methods:

This review used a customised realist approach, to explore how, why, for whom, and in what circumstances programmes are most successful in preventing multiple health risk behaviours in adolescents. The review synthesised evidence from published literature, along with qualitative data from stakeholders collected through focus groups with young people (n = 28) and school nurses (n = 22), and interviews with adolescent health and wellbeing practitioners (n = 8).

Findings: Across all the realist programme theories developed, the role of relationships was the most commonly occurring theme. This theme goes beyond the expected impact of the relationship between programme deliverers and recipients, and familial and peer attachments, also taking in to consideration the relationships between programme and school leaders and staff, support networks and collaborative relationships between staff, and wider social connectedness within the community. These in turn were impacted upon by wider contextual factors, such as family, community, culture, socioeconomic status, intersectionality, and health inequalities.

Conclusions:

These findings provide important insight in to understanding how, why, for whom, and in what circumstances multiple risk behaviour prevention programmes succeed or fail. Further to this they highlight key areas for consideration in the development of future adolescent public health interventions.

Key messages:

- Relationships built on trust and genuine care can improve adolescent risk behaviour prevention outcomes.
- Broader sociocultural context provide key explanations for variations in programme outcomes.

Identifying binge-eating disorders in obese young people living in vulnerable areas of Marseille

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Background:

While anxiety, depression and self-esteem have been identified as contributors to obesity, binge-eating disorder (BED) also requires attention to avoid worsening obesity. However, handling obese young people living in vulnerable neighbourhoods is rather difficult both in terms of psychosocial representations of obesity and the poor care offer. The objective of our exploratory research is to study the impact of a dedicated multidisciplinary management program on anxiety and depression of obese young adolescents presenting with, or not, a binge-eating disorder.

Methods:

Twelve patients (7 girls, 5 boys; mean age: 12.8 +/-1.3 years, range: 11-17) participated so far in this ongoing study. The mean body mass index was 36.5 +/- 7.2 (range: 27-53.4) for the group. They were all residents of vulnerable neighbourhoods of Marseille (France). They were evaluated at inclusion and 3 months after the 6-weeks program with the following self-questionnaires: Adolescent Binge Eating Disorder scale (ADO-BEDS), Hospital Anxiety Depression (HAD), 6-item Kutcher Adolescent Depression Scale (KADS-6), Self-esteem Measurement Scale for Adolescent (EMESA).

Results:

So far, only 3 patients were evaluated pre- and post-management. For two patients with ADO-BEDS scores at inclusion and post-management showing the presence of a BED, the KADS-6 and EMESA (general and physical appearance items) scores improved at 3 months. The remaining patient, without any depression signs at both inclusion and after 3 months, experienced a decreased self-esteem while a BED, not assessed at inclusion, was clearly revealed at 3 months. BMI did not change from pre- to post-management.

Conclusions:

Our clinical impression is that participating to the management program failed, at least for our first patients, to make them engage in a psychiatric/psychological therapy. Nevertheless, the program contributed to provide a motivating support system allowing them and their parents to become involved in their care.

Key messages:

- A multidisciplinary management program could potentially have a beneficial impact on depression and self-esteem in obese young adolescents presenting with a binge-eating disorder.
- The management program seemed to provide a motivating support system allowing obese young adolescents living in vulnerable neighbourhoods, and their parents, to become involved in their care.

Social deprivation and adverse perinatal outcomes in France: national study of preterm and SGA birth

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Introduction:

A slow but steady increase in preterm birth (PTB) rate has been reported in France in the last decades while decreasing in some European countries. Studies suggest PTB and small for gestational age (SGA) show a social gradient. Our objective was to determine whether this social gradient is changing in France over the study period.

Methods:

We selected all births records after 22 weeks of gestation in France between 2010 to 2017 (N = 6, 439, 355) in the French National Health Data System (SNDS). PTB was defined as birth before 37 completed weeks and SGA as birth weight below the 10th percentile according to the French intrauterine growth references curves. The SNDS includes an ecological social disadvantage index in quintiles (Q1:least deprived, Q5:most deprived). PTB and SGA rates were estimated in each deprivation quintile. Trends were quantified using a Poisson regression model.

Results:

The prevalence of PTB was 7.4% and SGA 11.9 % in 2017. French overseas regions (FOR) had the highest rates (7.2 vs. 10.9% and 11.5 vs. 18.0%, mainland France vs FOR respectively for PTB and SGA in 2017). Although we identified annual fluctuations, there was a significant average annual percentage change in prevalence of PTB and SGA respectively, +0.65% [IC95%:+0.1%; +1.2%; p = 0.03]; 0.66% [IC95%:+0.26%; +1.06%; p = 0, 01]. There was a marked but relatively stable social gradient over the study period. When combining all study years, PTB was more frequent among deprived women (Q5: 7.6% vs Q1: 6.8%) as well as SGA (Q5: 10.6% vs Q1: 12.1%).

Conclusions:

PTB and SGA prevalence trends are still increasing in France with regional disparities. Social deprivation remains a predictor of PTB and SGA.

Key messages:

- A persisting social gradient is observed in PTB and SGA in France.
- A better understanding of its mechanism will help designing interventions that will reduce social inequalities in health.

Environmental Health: Knowledge and Practice of Perinatal Health Professionals in Southern France

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Background:

The exposure of adults of reproductive age as well as of pregnant women and children to environmental contaminants is of particular concern, as it can impact fertility, in utero development, pregnancy outcomes and child health. Although worrying, this knowledge provides an opportunity to enforce interventions during these critical reproductive/developmental times, when they may have the greatest effect. Consequently, the World Health Organization (WHO) and international societies advocate including Environmental Health (EH) in perinatal care.

Objectives:

Our aim was to paint a picture of the current attitudes, representation, knowledge, and training expectations among Perinatal Health Professionals in south-eastern France.

Results:

In 2017, a cross-sectional study was performed in a large panel of perinatal HPs. Quantitative and qualitative information was collected via auto-questionnaire. Questionnaires were completed by 962 participants, mainly midwives (41.1%), physicians (25.6%) and nursery nurses (11%). Indoor/outdoor air quality and endocrine disruptors were the best-mastered topics, whereas electromagnetic fields and diet gave rise to unsure responses. Overall, perinatal HPs were ill-trained and -informed about the reproductive risks linked to daily environmental exposure. HPs reported scarce knowledge, fear of patient reaction and lack of solutions as the main barriers to providing information regarding EH to the public.

Conclusions:

In South-eastern France perinatal Health Professionals are eager to incorporate EH in their current practice. Our findings highlight the need to set up EH training programs focused on scientific knowledge and to provide simple messages and tips to help perinatal HPs deliver advice to populations to mitigate exposure to environmental toxicants.

Key messages:

- In South-eastern France perinatal Health Professionals are eager to incorporate EH in their current practice but ask for training.
- We are currently providing training programs combining practical sessions as well as basic and advanced scientific training adapted to the demand of medical and non-medical professional groups.

Surveillance of transient congenital hypothyroidism using the French newborn screening programme

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Introduction:

Congenital hypothyroidism (CH) is a condition of thyroid hormone deficiency present at birth. Untreated CH results in severe mental impairment. An increased incidence of CH has been reported in France and worldwide that could be explained by an increase in transient forms of CH (TCH). We aimed to estimate the proportion of transient eutopic gland based on the characteristics of children at birth.

Methods:

A probabilistic matching data from French CH neonatal screening program and French national health data system (SNDS) of children born between 2006 and 2012 (1, 763 with CH) allowed to linking 484 (68.8%) among 703 children with eutopic gland. Infants with six months or greater discontinuation of levothyroxine (LT4) treatment before the 31th December 2017 were classified transient CH. We used the Cox model to examine the predictors of TCH.

Results:

Among infants with eutopic gland, 52.9% were female, 14.9% were preterm and 14, 1 % had low birth weight, 11.8 % had a first degree family history of thyroid diseases, 48.1% of mild CH (TSH<50mU/L) at diagnosis and 30,0μg/j median dose of LT4 treatment. The probability of transient CH at five years of follow-up was 25.3% [IC95%:21.6% -29.4%] and 36.7% [31.7% -42.2%] after ten years. In a cox multivariable analysis, neonates with a TSH<50mU/L (adjusted Hazard Ratio = 4.1

[2.8-6.2]) and preterm 1.9 [1.1-3.4] had more risk to be transient.

Conclusions:

Prematurity and TSH level were predictors of transient CH. Additional analyses are ongoing to determine whether the occurrence of transient forms of TCH is increasing over the study period.

Key messages:

- Transient congenital hypothyroidism represent a significant part of HC at 10 years of follow-up.
- This finding has important implication on medical practices and should trigger research on the etiology of these transient forms.

Cost-effectiveness of mental health promotion and prevention for young people: a systematic review

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Background:

Effective mental health promotion and mental disorder prevention interventions may reduce the impact that mental health problems have on young people's wellbeing. The objectives of this research were to summarize and assess health economic evaluations of mental health promotion and prevention for children and adolescents aged 6-18 years.

Methods:

Four electronic databases were searched for full health economic evaluations published between January 1, 2013 and October 31, 2018 that evaluated the cost-effectiveness of universal mental health promotion and primary mental disorder prevention interventions. Each study was subject to a systematic quality-appraisal.

Results:

Nine studies were included. Eight were carried out in the European Union, and eight evaluated school-based interventions. All evaluated interventions led to incremental costs compared to their comparators and most were associated with small increases in quality-adjusted life years. Four studies evaluated the cost-effectiveness of cognitive behavioural therapy-based interventions for the prevention of depression or anxiety, with mixed results. Cost-effectiveness estimates for mental health promotion and anti-bullying interventions were promising. Drivers of cost-effectiveness were implementation costs, intervention effectiveness, delivery mode and duration, baseline prevalence, and the perspective of the evaluation. The overall study quality was reasonable, though most studies only assessed short-term costs and effects.

Conclusions:

Few studies were found. This limits the possibility of drawing strong conclusions about cost-effectiveness. There is some evidence based on decision-analytic modelling that anti-bullying interventions represent value for money. There is a lack of studies that take into account long-term costs and effects.

Key messages:

- Based on the evidence, schools should be supported in the implementation of long-term anti-bullying programmes to improve young people's wellbeing.
- More research is needed on the long-term costs and effects of mental health promotion and prevention for children and adolescents.

VBAC or not VBAC? Improvement of performance and outcome indexes with the promotion of care safety

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Background:

In a multidisciplinary approach to Quality Management System and humanization of care, we aimed at evaluating the characteristics that influence the request of women to carry out Vaginal Birth after Cesarean (VBAC).

Methods:

Skills have been improved, with the use of tests on dummies and case by case assessments. For the psychological-motivational study we have adopted: Informed consent, Semi-structured interview and Big Five Questionnaire. The women were recruited by both Gemelli and Cristo Re Hospital: the women following the counseling decided to undergo a second Caesarean Section (CS) (41, control group) and women who decided to complete a VBAC (22, experimental group).

Results:

The analysis of the data shows that the women of the VBAC group are in the average between 31-35 years (57%), 80% has an education = or > at the 3rd level and the choice of the VBAC was conditioned by the partner (64%). The women of the control group are in average > 35 years (51%), 60% have a higher average education and the influence on the choice is oriented by the gynecologist/obstetrician (64%). From the personality test a statistically significant difference emerges between the dimensions Energy and Mental Opening. Past experience influences the choice of the next birth: women who are inclined to a second CS considered the previous CS as a positive event (66%) while only 36% in the VBAC group; 64% of this was the recovery of the painful post-surgery and a certain type of difficulty in the care of the child, in breastfeeding, of having suffered from post-partum mood alterations, which is why they chose to undertake a Trial of Labor After Cesarean.

Conclusions:

The deeper knowledge of women as well as the preparation and safety of the same operators has shown that it is possible to perform a greater number of VBACs, with the sharing, participation and satisfaction of women and the entire team, leading to an improvement in outcomes and performance indexes.

Key messages:

- The promotion of care safety also improves the performance indexes through continuous training to the operators and the study of psychological aspects that lead to the choice to carry out a VBAC.
- Good Clinical Practice shown that it is possible to perform a greater number of VBACs, with the sharing, participation and satisfaction of women and the entire team.

Maternal admissions to Intensive Care Units in France: trends in rates, causes and severity

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Introduction:

Maternal intensive care unit admission (ICU) is an indicator of severe maternal morbidity. This study aimed to estimate rates of maternal ICU admission during or following pregnancy in

France, and to describe the characteristics of women admitted, the severity of their condition, associated diagnoses, regional disparities, and temporal trends between 2010 and 2014.

Methods:

Women hospitalised in France in ICU during pregnancy or up to 42 days after pregnancy between 2010 and 2014 were identified using the national hospital discharge database (PMSI-MCO). The Simplified Acute Physiology Score (SAPS II) was used to estimate the severity. Trends in incidence rates were quantified using percentages of average annual variation based on a Poisson regression model.

Results:

In total, 16,011 women were admitted to ICU, representing an overall rate of 3.97 ‰ deliveries. The average annual decrease in this rate between 2010 and 2014 was 1.7% (IC95%:-2, 00%; -1, 45%; $p < 0.0001$) on average per year. The SAPS II score increased significantly from 18.4 in 2010 to 21.5 in 2014. Obstetrical hemorrhage (39.8%) and hypertensive complications during pregnancy (24.8%) were the most common reasons for admission. Within mainland France, we found notable disparities in maternal ICU admission rates between regions, from lowest in Pays-de-la-Loire region (2.69‰) to highest in Ile-de-France (5.05‰).

Conclusions:

The rate of maternal ICU admission decreased from 2010 to 2014 in France, with a concomitant increase in case severity. Additional studies are needed to understand the territorial disparities identified in our study.

Key messages:

- The decreasing incidence of maternal ICU admission could be due to organisational changes with increased admission to intermediate care units.
- These changes have to be understood to accurately use maternal CU admission for maternal health surveillance.

A French network for prevention and reduction of reproductive risk in couples and pregnant women

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Background:

Since 2013, several international (ASRM, FIGO, ACOG) and French (ANSES) learned societies and the French National Health and Environment Plan (2015-2019) urged to take into account exposures to environmental reprotoxic substances during standard care of infertile couples and pregnant women. However perinatal health professionals hardly incorporate this recommendation into practice.

Objectives:

To create a network of platforms to addressing the environmental aspects that can impact the pregnancy chances of infertile couples after ART and pregnancy outcomes.

We asked regional health authorities in France to provide funding for multidisciplinary hospital structures, in conjunction with clinical-biological reproductive health and gynecology-obstetric centers. Expertise, as well as information leaflets and risk detection tools have been shared.

Results:

Platforms of counselling and prevention have been set up in the University Hospitals of Bordeaux, Marseille, Rennes, Créteil and Paris Fernand-Widal. Infertile couples and pregnant women, referred by reproductive physicians, benefit from personalized management of their domestic/professional reprotoxic exposures by addictology/tobacco, dietetics, occupational health and environmental pathology professionals. The network organizes an annual scientific day and a common database of exposure is being set up.

Conclusions:

The PREVENIR (PREVENTION - ENVIRONMENT - Reproduction) network of platforms allows perinatal health professionals to refer their patients in order to optimize their chance of pregnancy through personalized and multidisciplinary care. The lifestyle changes initiated through this approach will also improve pregnancy outcomes and child health.

Key messages:

- A French network for the prevention and reduction of reproductive risk in infertile couples and pregnant women: the PREVENIR platforms (PREVENTION - ENVIRONMENT - Reproduction) is being established.
- Perinatal health professionals of multidisciplinary platforms engage into preventive actions to limit the exposure to environmental hazards during preconception and pregnancy.

Parental Education, Health Literacy and Children's Height in Adult Life

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Background:

Adult's body height has been positively associated with various health and social benefits. Studies have demonstrated that parental education is one of the key covariates of individual's health and height in both childhood and adulthood. However, another important covariate of child's health, parental functional literacy, has been largely overlooked in studies on height. The objective of this study was to analyse the associations between parents' education, their health literacy and children's adult body height.

Methods:

We used data for 17,331 men and 21,909 women from the 2016 wave of the nationally representative Life in Transition Survey (LITS) conducted in 34 countries in Southern and Eastern Europe, the Middle East, and Central Asia. Using ordinary least squares and Poisson regression models, we analysed the links between both mothers' and fathers' educational attainment, parental functional literacy - measured by the number of books in childhood homes - and individuals' height, while also taking into account other available individual and contextual explanations of height which occurred either before respondents' birth or during their childhood.

Results:

Our results demonstrate that mothers' educational attainment and parental functional literacy have strong independent associations with children's adult height. Sufficient literacy skills of the parent may have positive effect on children's growth even if parental education is low. These associations hold for both men and women and remain significant across time.

Conclusions:

This study offers a unique contribution by tracking the long-term trends in height and its socio-demographic and socio-economic explanations. Reported differences in individuals' adult height were linked with early childhood living conditions, specifically, with mothers' education and parental functional literacy.

Key messages:

- We track the long-term trends in height and its socio-demographic and socioe-conomic explanations.
- Regardless of the level of maternal education, parental functional literacy is a strong and consistent predictor of individuals' height.

First national results of the evaluation of the neonatal hearing loss screening programme in France

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Background:

The French newborn hearing screening programme set up in 2014 aims to identify affected children as early as possible to allow appropriate care. Our goal was to evaluate the implementation of this programme at the national level.

Methods:

The programme consist in a screening using a test (T1) and a retest (T2) in the maternity hospital in all newborns. In some region, a delayed test (T3) is performed afterwards in children for whom it was not possible to confirm normal hearing. Children suspected of deafness subsequently enter the diagnosis phase. We defined evaluation indicators after stakeholders consultation. We developed a web application to collect aggregated data on live births. We estimated the rate of coverage, refusal, children suspected of hearing loss at the end of the screening phase and the prevalence of bilateral deafness.

Results:

In 2015, one year after the initiation of the programme, the coverage rate was already very high (88%) and even more so in 2016 (96%). Parental acceptance was very good (refusal: 0.1%). By the end of 2016, 19 out 27 regions had added a T3. The rate of suspicion of bilateral hearing loss was decreased by using a T3 (1.4% vs 0.9%). Bilateral deafness rate, estimated after a 2-years follow up, was 1.3‰ although it was estimated only on 51.5% of suspected children for whom diagnosis data had been transmitted.

Conclusions:

The objective of a 90% coverage set by the French ministry of health has been met after 2 years of operation of the program. T3 appears useful in relieving diagnostic structures from false positives. Our estimated prevalence of bilateral deafness could be more accurate if data collection was improved but is consistent with prevalence reported in North America.

Key messages:

- The universal newborn hearing screening program has been successfully set up in France in terms of coverage.
- Future work should focus on improving the collection of follow up data to better characterise diagnosed children.

Potential effective elements in combined lifestyle interventions for overweight children

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Background:

Combined Lifestyle Interventions (CLIs), offered in primary care, aim to prevent childhood overweight/obesity. Combined means the intervention focuses on optimalising nutrition behaviour, physical activity and mental health, provided by a multidisciplinary team. Although the effectiveness of CLIs is still not clear, CLIs are already implemented in daily practice in the Netherlands. These CLIs are not uniformly designed and have variations in protocols to suit the needs of their community. Due to the many different CLIs it is difficult to investigate their effectiveness. To be able to investigate effectiveness of GLIs, we first need to unravel the 'black boxes' of CLIs and identify their (potential) effective elements.

Methods:

First, we carried out a literature study on elements that may contribute to the effectiveness of a GLI (the so called potential elements). Next, we organized an online brainstorm session, where experts such as researchers and paramedics could add or specify potential elements. We made all elements measurable, with help of experts. These elements were incorporated into a tool to check presence of potential elements in CLIs. This tool was tested on reliability by comparing the results of four researchers who assessed protocols of six CLIs.

Results:

42 experts participated in the brainstorm session. The literature study and brainstorm session together resulted in 54 potential elements for CLIs for overweight/obese children, categorized in four themes: organization, content, role of parents and role of experts. For all six protocols, a minimum of 85% of the potential elements in the tool have been scored the same by the four assessors.

Conclusions:

We developed a reliable tool to determine potential effective elements in a CLI. In future studies, this tool can be used to identify specific elements that are effective in CLIs for overweight/obese children by comparing the tool with health effects of CLIs.

Key messages:

- We were able to develop a reliable instrument to better analyze the factors that contribute to positive health effects of combined lifestyle interventions for children with overweight or obesity.
- the developed tool with potential effective elements must be filled in for more CLIs, where after we can find corresponding elements in the most effective CLIs.

Women's experiences with labor companionship in public facilities in Arab countries

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Background:

Childbirth in the Arab region is characterized by overmedicalization and inequities in access to-and provision of care. Hospital practices do not provide choices for women and respond to the convenience of providers rather than women's needs. Provision of maternity care is reflective of existing social inequities which is manifested through mistreatment and disrespect of women within the health care system. One such example lies in the restriction of birth companions in public facilities in Arab countries despite being practiced in private settings and the strong evidence supporting its implementation globally.

Methods:

A phased mixed-methods implementation research study was undertaken in three public hospitals in Lebanon, Egypt and Syria with the aim of developing a tailored labor companionship model and evaluating its implementation. Data presented emanate from the qualitative component of the study. Semi-structured interviews were conducted with women giving birth (n = 59) and their labor companions (n = 57) in three facilities. Thematic analysis was used.

Results:

Beyond the introduction of the model into the system, women reported improvements in dimensions of respectful maternity care. Changes made in shared labor rooms improved women's privacy. The presence of labor companions improved communication between health care providers, women and their families. Women reported feeling "dignified" and "strong" in the presence of companions. There was a "feedback loop" from the facility to the community with word spreading about labor companionship "just like in private hospitals".

Conclusions:

The labor companionship model improved equitable access to dignified and respectful maternity care through better rapport between women and health care providers, preservation of women's privacy and having access to birth companion of choice. The provision of evidence-based care has potential implications on women's experiences with the health care system.

Key messages:

- This labor companionship model ensured positive experiences for women giving birth in public facilities in Arab countries.
- Women perceived the model as type of care that reduces differential treatment based on social status and enhances respectful maternity care.

Trends in physical activity and overweight among adolescents and their parents in Russian population

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Background:

Unhealthy lifestyle, including physical inactivity and overweight, typically begins in adolescence. Familial aggregation of the factors aggravates the predictive risk. During the 1990s Russian population has been exposed to major political, economic and social changes.

Methods:

Seven cross-sectional surveys of representative samples of school children aged 14-18 in 1989-2019 were carried out in Novosibirsk. Total sample was 4677 (45% males). To define overweight in adolescents the sex- and age-specific BMI cut-offs of the IOTF were used. Information about parents physical activity (<150 min/week), height and weight was obtained by mail questionnaire. Parents overweight registered if $BMI \geq 25$.

Results:

Levels of low physical activity in adolescents were stably high during all the period in boys (49-55%) and girls (83-73%) with a rising trend in recent years. In 2009 average amounts of weekly screen time were 18 hours in boys and 15 hours in girls, In 2019 - 35 and 33 hours respectively. Their parents had low levels of physical activity: 2,5 hrs/w in men and 1,5 hrs/w in women without any trends. The prevalence of overweight among adolescents during the 30-year period showed U-curve characteristic with significant decreasing (4,0%) at the end of 90s and rising since 2003 particularly in boys (17.6% in 2019, $P < 0{,}01$). Overweight prevalence among parents was high: from 25% in 1989 to 38% in 2019 ($P < 0{,}05$) and from 32% in 1989 to 28% in 2019 among fathers and mothers respectively. Familial associations between parents and children were found for overweight but not for levels of physical activity.

Conclusions:

Levels of physical activity in Siberian adolescents and their parents were low during 30-year period. Trends in the prevalence of overweight in this groups were differed. Familial aggregation of overweight indicates necessity of preventive actions at a family level.

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Key messages:

- Levels of physical activity in Siberian adolescents and their parents were low during 30-year period.
- Trends in the prevalence of overweight in adolescents and their parents were differed: the shaped curve in children and linear - in parents. However familial associations of overweight were found.

School bullying among Tunisian adolescents: prevalence and psychosocial outcomes

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Background:

Bullying is a serious public health concern affecting the emotional well-being of pupils. We conducted this study to examine the prevalence of bullying, its psychosocial associated factors and the perceived involvement of parents, teachers, and classmates to counteract this behavior.

Methods:

This is a cross-sectional study conducted in 2015 among a representative sample of pupils enrolled in 14 colleges in Sousse using the revised Olweus Bully/Victim Questionnaire.

Results:

We included 1584 students aged between 11 and 15 years. The prevalence of bullying and victimization was 16.0% [95% CI: 14.2%, 17.8%] and 11.3% [95% CI: 9.7%, 12.9%] respectively. Four groups of students were identified, 11.7% were classified as pure victims, 7.8% as pure bullies, 3.2% as bully-victims and 75.5% as bystanders. Compared to other groups, the bully-victims were less likely to report a feeling of empathy (38.3%, $p < 10\text{-}3$) and liking school (30.0%, $p < 10\text{-}3$). They were more likely to be aggressive (56.2%, $p < 10\text{-}3$) and disintegrated in the class (30.6%, $p = 0.002$). Among the victims, 11.1% reported that their parents contacted the school several times to stop their victimization. The majority of the middle school students perceived that their classmates (54.1%) and teachers (39.5%) did nothing to counteract the bullying behavior.

Conclusions:

The school institution is expected to be for pupils a highly meaningful space for social, emotional and academic development. Parents, teachers and students should learn effective ways to handle the bullying problem since it has been emphasized that the most effective programs are comprehensive targeting students, schools, families, and the community.

Key messages:

- This is the first study conducted in Tunisia to highlight the extent of school bullying.
- Our findings can help to raise awareness of parents, school staff and policy makers about bullying.

Parents' evaluation of early home visit by midwife

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Background:

The Norwegian guidelines for postnatal care strongly recommend that families are offered home visit by a midwife within the first week after early discharge from maternity clinic, in addition to home visit by health visitor 7-10 days after delivery. Due to lack of midwifery resources out of hospital, Bergen municipality has started a project where selected groups such as first time mothers, minority families and women who during pregnancy are defined as being in need of extra follow up, receive a home visit by their antenatal midwives. The main purpose of the study is to explore user satisfaction with the home visit by the midwife, and the parents' experience of security and coping the first week after the delivery.

Methods:

The design is a mixed method design including a clinical controlled trial. In addition to questions about the home visit, Parents' Postnatal Sense of Security is used to measure safety, and by The Orientation to Life Questionnaire, coping as a Sense of Coherence is measured. The trial includes an intervention group who receive home visit by midwife, and a control group who met the inclusion criteria, but of different reasons do not receive home visit by midwife. The data collection started in November 2018 and is in progress.

Results:

Preliminary results shows that the families consider home visit by midwife as useful, and as a good support the first week after delivery. Results from comparing the two groups regarding Sense of Security and Sense of Coherence will be presented.

Conclusions:

Implications for better postpartum care will be presented.

Key messages:

- Investigate parents' satisfaction with postpartum care at home, and 'sense of security' and 'coping as a sense of coherence'.
- Contribute with suggestions for how to improve the postnatal care in a health promoting perspective.

Analysis of coordinating capacities in schools of grades 10 and 11 in a public school of Bogotá

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Studies that address the problem of excess weight and inactive behaviors such as television and video games in children and adolescents have focused on chronic noncommunicable diseases, with few studies about the effects of sedentary lifestyle on coordination capacities (balance, precision and movement capacity).

The objective of the study is to analyze the coordinative capacities in school children of grades 10 and 11 in a public school in Bogotá. This analytical cross-sectional study was conducted on 63 schoolchildren (30 men and 33 women) with an average age of 16.24 ± 0.689. The motor quotient was evaluated by means of the KTK test with the authorization of the institutional ethics committee, assent signature and informed consent. Descriptive statistics were obtained (mean SD frequencies, percentages). Data were tested using Kolmogorov-Smirnov test and independent t-test was applied to measure the significant difference among the variables. P-value less than 0.05 was considered a significant difference.

The motor quotient showed the following qualifications: symptomatic 11.1% (n = 7), normal 58.7% (n = 37) and good 30.2% (n = 19). Statistically significant differences ($p < 0,05$) were found in the motor quotient between boys (37,048) and girls (34,374), with girls being mainly in the symptomatic category. It can be concluded that girls need to increase motor experiences to improve their coordinative abilities. The importance of this study consisted in the possibility of identifying the effects of sedentarism on coordination capacities, as well as the impact produced by the current government by reducing hours of physical education in schools, leading to an increase in sedentarism. For this reason, it is essential to develop research aimed at stimulating coordination capacities in schoolchildren as a strategy to reduce public health problems.

Key messages:

- For this reason, it is essential to develop research aimed at stimulating coordination capacities in schoolchildren as a strategy to reduce public health problems.
- Promotion of public policy as a Determining factor in the reduction of sedentarism in children, through Strategies that include assessment of Coordinating Capacities of schoolchildren.

DF Chronic diseases

Association between leisure-time physical activity and the risk of chronic diseases

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Background:

According to the World Health Organization, non-communicable diseases or chronic diseases, account for 71 percent of all deaths globally, affecting individuals of all age groups and countries. Epidemiological studies have shown an association between a lack of physical activity (PA) and the risk of raised blood pressure, increased body mass index and obesity that can lead to chronic diseases.

Methods:

The aim of the study was to assess the relationship between leisure-time PA and the risk of chronic diseases among adult population. We conducted a cross-sectional study of 470 men and 641 women who participated in "The Impact of Sustainable Mobility, Physical Activity and Environmental Factors on Urban Population Health Study (ISMA)" in Lithuania. Leisure-time PA was self-reported and divided into three levels: low, moderate and high. Logistic regression was used to estimate adjusted odds ratios (ORs) of chronic diseases according to leisure-time PA.

Results:

More than half (55%) of the study population engaged in a moderate intensity PA and 12% of participants engaged in a high intensity leisure-time PA. Men 1.6 times more often than women reported engaging in a high intensity PA in leisure time (p = 0.004). Adults who engaged in low intensity leisure-time PA had almost 3 times (OR = 2.91; 95% confidence interval (CI) 1.62-5.24) higher risk of chronic diseases, whereas those adults who reported moderate intensity leisure-time PA had an OR of 1.63 (95% CI 0.92-2.87) compared to individuals who engaged in a high-level PA.

Conclusions:

Our findings suggest that high levels of leisure-time PA could reduce the risk of chronic diseases and this effect was significantly stronger in men.

Key messages:

- Global decline in PA is related to inaction during leisure time and sedentary behaviour at work and at home that has a major health impact worldwide.
- High levels of leisure-time PA are important factor for chronic disease prevention.

Using 'White Flags' to categorize socio-cultural aspects in chronic pain

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Issue:

Persistent chronic pain is a major medical and health economic problem. To assess the individual pain situation, the classification of various factors (flags) has been established.

Description of the problem:

Structural biomechanical factors are classified as ''red flags''. Psychological or behavioral factors are summarized as ''yellow flags'', psychiatric and mental illness as ''orange flags''. Both last flags are important for planning adequate therapies or rehabilitation, as well as for decisions to prognoses and tailored reintegration programs. An extension of the flag model was achieved by naming personal factors at workplace as ''blue flags'', and ''black flags'', if there is a restriction for returning to work. All these groups do not consider other important reasons for unsuccessful rehabilitation or failed reintegration.

Results:

In these cases, often described as 'therapy-refractory', clients often exhibit a special subjective understanding of illness that reacts neither to psychological interventions nor to behavioral therapies. These include individual beliefs based, for example, on cultural socialization, religious education, or spiritual experiences. Since such individual mental illnesses are culturally ideologically or religiously justified, they should be classified in a separate group called 'white flags'.

Lessons:

The advantages of categorizing sociocultural aspects separately from other flag classifications are

- avoidance of unnecessary therapies, including surgery,
- prevention of iatrogenisation,
- prevention of legal disputes.

It is important to realize that only health restrictions for insurance benefits can be taken into account and that individual socio-cultural circumstances or health convictions are not evaluated.

Main messages: A classification of 'white flags' could contribute to a better classification of pain which are not accessible to various therapies and reduce reservations and misunderstandings by intercultural communication approaches.

Key messages:

- For medical professions it is important to recognize, that only health inabilities are taken into account for insurance compensation and not individual socio-cultural circumstances or health beliefs.
- In Future classifying 'white flags' could help to properly assess persistent pain conditions.

Teaching Program for laymen and experts for neighborhood-based offers to elderly people living alone

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Background:

For multimorbid very old people who are living alone, care networks are needed to ensure continuous and coordinated care across the sectors.

Objectives:

The GeriNeTrainer (trainer in a geriatric network) is intended to preserve the day-to-day competences of elderly and to reduce the prevailing regional lack of help. Which content and structural aspects must include an educational concept that is aimed equally at laymen and experts (e g physiotherapists, nurses) and can be implemented sustainably? The competence profile was developed by an interprofessional staff of experts. According to the literature review, they rated the CanMeds role concept as the most relevant and suitable framework with regard to the holistic approach to care. Therefore, the teaching curriculum was developed based on this.

Results:

Depending on the level of knowledge, interested laymen or experts enter the evident curriculum. The team of lecturers consists of physiotherapists, social workers, physicians, sports scientists, psychologists and speech therapists. As teaching and learning methods were defined: lectures, seminars, exercises, caseworks as well as compulsory homeworking in best practice facilities. The interprofessional imparting of knowledge as well as the exchange of experience between the individual occupational groups as well as the methodical inclusion of the perspective of laymen were evaluated as particularly beneficial and innovative. For sustainability, the certified graduates are supervised. Observation, a case study based on this, an electronic platform (Moodle) and annual conferences and symposia enable regular and practice-oriented communication and quality assurance in the sense of the continuous improvement process.

Conclusions:

The graduates are connecting patient home with the health facilities. Increased professional, social and emotional competence in the quarter have positive effects of elderly people who are living alone.

Key messages:

- Valuable is the educational concept by conveying knowledge and exchange of experience of individual specialist groups as well as the lay perspective.
- Laymen and experts are learning together, their different perspectives are very helpful for the elderly.

Beyond the diabetes epidemic – a public health challenge

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Introduction:

Various factors pertain to the development of type 2 diabetes (T2DM). While exploring the risk factors and links to T2DM at a population level, certain unexpected relationships were identified in a cross-sectional study representative of adults in Malta (2014-6).

Methods:

A health examination study was conducted among a representative sample of adults in Malta (18-70 years). Validated medical data was collected for fasting glucose (FBG) and lipid profiles. Self-reported Diabetes (T2DM) and a fasting glucose level(FBG) >7mmol/L were labelled as T2DM. Regression analysis explored T2DM and components of the lipid profile while adjusting for confounding factors (age, gender, residing locality, education level, employment status, use of statins). Separate analysis compared non-diabetic and metabolically healthy sub-populations as a reference to T2DM population respectively.

Results:

A negative association was found between an increase in LDL-C (OR: 0.76 CI 95% 0.65 - 0.89, p = <0.01) and a diagnosis of T2DM when the non-diabetic sub-population was the reference category. A negative association was also present for total cholesterol (OR: 0.79 CI 95% 0.69 - 0.91, p = <0.01). On the contrary, a positive relationship with T2DM was present for both parameters (LDL-C OR: 4.15 CI 95%: 2.79 - 6.17, p = <0.01 and Total cholesterol OR: 2.45 CI 95%: 1.84 - 3.33, p = <0.01) when the metabolic healthy sub-population was the reference category. Similar results were present after adjusting for confounders.

Conclusions:

Individuals without an established diagnosis of T2DM but with a biochemical and/or anthropometric abnormality are still at metabolic risk. Hence, preventive policies targeting metabolically at-risk persons at the community level need to be explored in order to target the health inequalities gap.

Key messages:

- Health inequalities are present in individuals with normoglycemia but with biochemical and/or anthropometric abnormality.
- Preventive policies need to target metabolically unhealthy population irrelevant of their glucose status.

Lifestyle related risk factors of coronary artery disease patients in Nepal

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Background:

Coronary Artery Disease (CAD) is a leading cause of morbidity and mortality and serious health problem worldwide. It is important to observe lifestyle related risk factors in patients with CAD for effective planning and implementation of secondary prevention strategies. The aim of this study is to describe the prevalence of lifestyle related risk factor habits among the patients with CAD.

Methods:

A cross-sectional study was conducted among CAD patients in a tertiary care national heart center in Kathmandu, Nepal. Six lifestyle related factors (dietary habit, smoking, alcohol consumption, stress, physical activity and adherence to medication) and Body Mass Index were used as the risk factors of CAD in this study. Individual face-to-face structured interview was conducted using culturally validated standard instruments. The descriptive characteristics were presented as frequencies and percentages for categorical variables and as mean ± standard deviation (SD) or median and interquartile range (IQR) otherwise.

Results:

In total study population, the mean age of the patients was 59.9 years and 76% were male. Patients having any three risk factors out of seven were the most common (36%) followed by two risk factors (25%) and four risk factors (22%). About 32% of study population were current smokers, whereas 29% were former smokers. Likewise, 31% of the total were physically inactive. Majority of the patients 95% had perceived moderate stress.

Conclusions:

The prevalence of lifestyle related risk factors is high among CAD patients in study population. Combination of any three lifestyle related risk factors were the most common among patients. Therefore, studies focusing on lifestyle risk factor modification intervention on particular groups is recommended.

Key messages:

- Need to improve awareness about lifestyle related risk factors among CAD patients.
- Highlight the importance of lifestyle counselling.

Positive health as a new concept for physiotherapy in the Netherlands?

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Background:

The current WHO definition of health seems to no longer meet the changes in the current Dutch health system. An alternative approach which puts emphasis on health, not disease, is Positive Health. This focus shifts the emphasis on improving resilience and well-being rather than the perspective on what is lacking in health. In 2014, this new definition of Positive health was included in the professional profile 'physiotherapist' of the Royal Dutch Association for Physiotherapy. This study examines the attitude of physiotherapists to Positive Health and to what extent they experience this concept in their current working practice.

Methods:

A mixed method study was used, with a quantitative and qualitative method. A survey was completed by 276 physiotherapists and 7 semi-structured interviews were conducted among physiotherapists.

Results:

Positive health was considered positive by 68% of the physiotherapists that health is seen as a dynamic concept rather than static, and 60.5% consider it important that the emphasis is on self-regulation. However, physiotherapists wonder if all patients have the ability to self-manage skills. The qualitative analysis shows that all therapists find the new definition positive and that it covers all aspects of health.

Conclusions:

In general, physiotherapists are positive about the definition of positive health. Positive health can help physiotherapists in their work with clients and other professionals because of the multidisciplinary approach.

Key messages:

- Positive health can help physiotherapists to promote health in their clients.
- Positive health can stimulate cooperation between physiotherapists and client to increase self-management.

Unsatisfactory effectiveness of preventive programs for oncogynecological diseases in Bulgaria

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Background:

Incidence rate and mortality of breast cancer and cancer of the cervix uteri in Bulgaria are higher in comparison with most countries of European Union (EU). Moreover, during the last three decades they have been increasing, even doubled for cervix cancer, although in developed countries there are proven effective prevention programs. The aim of the study is to explore how these programs are being implemented in Bulgaria and what caused their unsatisfactory results.

Methods:

Data were collected by documents review and direct individual self-administered questionnaire among 186 women aged 30-69 concerning types and regularity of preventive activities.

Results:

National Health Insurance Fund in Bulgaria defines as mandatory and finances a regular check-up annually for health insured people over 18 years of age. Mammography, as a screening of a breast cancer, was included in regular check-up package from the year 2011, once at every two years, for women aged 50-69. Papanicolau test for cancer of the cervix uteri wasn't provided in the preventive package until the year 2017 when it was included only for women who complete 30 years of age in the current calendar year with intended regularity once at every two years. Women from other age groups currently are not covered with preventive examination for cervical cancer or they should pay for it which restricts accessibility and affordability of prevention activities. Study results indicates that every fifth of the investigated women have never had a prophylactic examination for breast cancer and cervical cancer. In addition, 69.4% of those who have such examination did not comply with the recommended regularity.

Conclusions:

Screening programs against breast cancer and cancer of the cervix uteri are consistent with the recommendations of the oncology research societies but they being applied relatively soon in Bulgaria and some age groups are out of their coverage which decreases their effectiveness.

Key messages:

- Incidence rate and mortality of breast cancer and cancer of the cervix uteri in Bulgaria are higher than in most countries of European Union although there are proven effective prevention programs.
- Screening programs against breast cancer and cervical cancer are not effective because of their low accessibility and

affordability and because they don't comply with the recommended regularity.

Type2 diabetes:changing patterns of use of antidiabetic drugs 8 years after starting treatment(snds)

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Objective:

To describe the changing patterns in the use of the various classes of antidiabetic drugs in a cohort of patients newly treated for diabetes from 2008 to 2015 on the basis of comprehensive health insurance data.

Methods:

General scheme beneficiaries 45 years and older were identified in the French National Health Data System (SNDS) as newly treated when antidiabetic drugs were dispensed on at least 3 different dates in 2008 and at least once during the last 4 months of 2008, but were dispensed less than 3 times in 2006-2007. Treatment regimens for the last 4 months of each year were defined for this cohort.

Results:

158,000 people (53% men, mean age 62 years) initiated antidiabetic drug therapy in 2008: monotherapy (without insulin): 74%, dual therapy: 17%, treatment with 3 or more drugs: 3%, and insulin therapy: 7%. The proportion of patients taking monotherapy decreased by 13 percentage points during the second year and only 32% of the cohort was treated by monotherapy 8 years after starting treatment. The proportions of patients taking dual therapy increased by 4 percentage points (21% in 2015), triple therapy increased by 8 percentage points (11%), a combination of insulin+other antidiabetics increased by 4 percentage points (7%) and insulin alone remained stable (4%). At the last quarter of 2015, 12% of patients did not receive any antidiabetic drugs and 13% had died. The creation of a cohort of diabetic patients newly treated in 2013 demonstrated changing prescribing practices: a lower proportion of monotherapy in the first year of treatment, but a growing use of metformin.

Conclusions:

Treatment was intensified during the first 8 years for one half of the cohort. The maximal dosage of Metformin is not used before introducing a second antidiabetic in 1 case in 2. Insufficient use of Metformin, in general and in terms of dosage, was observed, although this use is improving.

Key messages:

- Initiation of antidiabetic drug therapy in people 45 years and older consisted of monotherapy in 3/4 of cases in 2008.
- Insufficient use of Metformin, in general and in terms of dosage, was observed, although this use is improving.

Dynamics of the occupational respiratory diseases in Bulgaria in the period 2009-2016

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Background:

The number of occupational respiratory diseases has declined in recent years in Bulgaria. This is the result of technological advance, mechanization and automation of the processes generating high levels of dust in the work environment; adequate ventilation; personal protective equipment and, last but not least, the training of workers on preventive approaches.

Methods:

The aim of the study is to find out the trends of registered occupational respiratory diseases in Bulgaria in 2009-2016, according to official statistics. Analytical and statistical methods were used.

Results:

In 2016, the number of occupational diseases (n = 33), registered in Bulgaria decreased by 71.55% compared to 2009 (n = 116). In 2009, the relative share of silicosis from respiratory occupational diseases was 47.54% (n = 29), while in 2016 it grew to 64.29% (n = 9). Its share is also increasing as part of all occupational diseases in Bulgaria from 25% in 2009 to 27,27% in 2016. The registered cases of chronic rhinitis, nasopharyngitis and pharyngitis for the whole period are only 2, of professional asthma - 3; of chronic bronchitis - 5, less than cases of asbestosis - 9. In 2009, there were five reported cases of talcosis and the total number of cases of siderosis was 23 for the period of eight years. There are 4 cases of other pneumoconiosis and 2 of pneumoconiosis associated with tuberculosis, as well as 10 cases of toxic pulmonary fibrosis during the whole period.

Conclusions:

It is worth noting the small number of occupational respiratory diseases that could be caused by other factors not necessarily related to the work environment, such as chronic bronchitis and asthma, although they are significantly more frequent than those mandatory caused by occupational hazards such as silicosis, asbestosis and toxic pulmonary fibrosis. This means that a significant proportion of these cases are counted as common chronic non-communicable diseases with significant negative social consequences.

Key messages:

- The registered occupational respiratory diseases decrease, but the relative share of those with strictly professional etiology, such as silicosis, is growing.
- A significant proportion of occupational respiratory diseases are reported as chronic non-communicable diseases.

Prevention of chronic diseases in family medicine in Croatia

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Background:

Inappropriate habits and behaviour patterns are risk factors for most chronic non-communicable diseases. Prevention and education are one of the continuous tasks of public health professionals. Primary preventive care requires an active approach from the health professionals.

Methods:

This program includes preventive examination and certain laboratory tests persons older than 55 who did not visit their family doctor at least two years. 721 persons were examined and interviewed from 2014 to 2018. The paper shows analytic results expressed in percentages of the prevalence and 95% confidence interval (CI).

Results:

A total of 721 patients were included. Sex ratio male:female was 0.47. The age (mean) was 61.4 years [standard deviation (SD) = 9.1]. Up to three alcoholic drinks per week consumed 22.1% respondents (37.1% male and 11.9% female). There were 24.1% smokers and 14.6% former smokers. Overweight (BMI 25-30) were 44.4% male and 36.3% female. Obese (BMI>30) were 27.6% male and 30.3% female. Digitorectal examination was performed in 582 persons and detected pathological phenomena in 10.3% female and 19.4% male. Hypertension was found in 14.9% male and 18.2% female. Isolated systolic hypertension was found in 19.8% male and 16.7% female, and isolated diastolic hypertension in 3.9% male and 3.5% female. Suspicion on one or more newly diagnosed disease was placed in 55.9% (95% CI 52.3-59.5) respondents. In total, there was a suspicion of 696 newly diagnosed diseases. Newly diagnosed diseases were disorders of lipoprotein metabolism (n = 156, 21.6%), followed by hypertension (n = 69, 9.6%), obesity (n = 52, 7.2%) and independent of insulin diabetes (n = 51, 7,1%). 53 persons [7,4% (95% CI 5,4-9,3)] had suspected neoplasm and they were immediately referred for further diagnostic evaluation.

Conclusions:

The public health significance of such programs with active approach and detecting malignant state as early as possible is extremely important.

Key messages:

- Primary preventive care requires an active approach from the health professionals.
- Detecting chronic non-communicable diseases in earlier phase is important and confirms the public health significance of prevention programs.

Mortality trends for multiple sclerosis in Italy

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Background:

Multiple sclerosis (MS) is the immune-mediated inflammatory disease affecting myelinated axons of the central nervous system with enormous socio-economic impact. The aim of this study was to analyze mortality trends for MS in Italy.

Methods:

The mortality data relative to period 1980-2015 were provided by Italian Institute of Statistics, data were aggregated in 5 intervals (1980-1986; 1987-1993; 1994-2000; 2001-2008; 2008-2015). The Age-Standardized mortality Rates (SR) with respective 95% confidence intervals (95%CI) were calculated (using the European standard 2013) in order to evaluate the mortality trends (in confrontation to the initial period) and Standardized Mortality Ratios (SMR), in order to confront mortality in 5 major geographic areas: North-East (NE), North-West (NW), Central Italy (CI), South Italy (SI) and Islands (I).

Results:

During the study period 4959 deaths for males and 7433 for females were observed. The SRs were significantly higher for females (0.71;95%CI:0.70-0.73 vs. 0.56; 95%CI:0.54-0.57).

Significantly higher SMR were observed for both sexes in I (M:123.3 vs F:112.7), for females also in NE (106.5) and NW (115.8). Significantly lower SMR for both sexes were observed in SI (M:88.8; F:71.4) and for males in CI (90.9).

The observed SRs during the five intervals for males were: 0.65(95%CI 0.60-0.69); 0.52 (95%CI 0.49-0.56); 0.46 (95%CI 0.43-0.49); 0.53 (95%CI 0.49-0.56); 0.59 (95%CI 0.56-0.62); and for females: 0.69 (0.65-0.73); 0.69 (0.65-0.73); 0.61 (0.58-0.65); 0.68 (0.65-0.72); 0.81(0.77-0.84); respectively. An initial decrease of SRs was observed for males until 2001-2007 in confrontation to the initial period ($p < 0.05$). For females significant increase of SRs was observed in 2008-2015 ($p < 0.05$).

Conclusions:

An increase of mortality for MS, observed for females, especially after 2000 may reflect the raising prevalence of MS in Italy. Important geographical differences were observed for five main areas.

Key messages:

- During the study period an increase of mortality for MS was observed for females.
- Important differences were observed between five main Italian geographic areas.

Maternal perceptions of paediatric cancer and diabetes in Cameroon

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Background:

Maternal perceptions of paediatric cancer and diabetes are still poorly studied in Cameroon, while they are considered as an inevitable part of the chronic diseases. Little is known to what maternal representations of paediatric cancer or diabetes refer to. Their contents remain unknown; and they are rarely taken into account in training programs for health care providers and educators. Yet, when ignored, they can have consequences impacting the relational dimension of care, prevention of relapses, disease complications, health education and behaviour change.

Methods:

Based on a critique of the psychosocial conceptual models used in prevention, this study combines a qualitative approach aimed at identifying and describing mothers' perceptions about paediatric cancer and diabetes, transforming them into educational content that can be reused for the training of health care providers and educators; and a quantitative component, obtaining their impact on the therapeutic relationship and therapeutic compliance.

Results:

The results show that caregivers (healers, physicians), children, mothers and their close family are involved in the relational component of care; the Cameroonian mother expects that the therapist consulted should be a psycho-oncologist or a psycho-diabetologist, who can (power) and knows (knowdlege). Maternal perceptions determine the techno-therapeutic dimension, and may, if ignored, threaten therapeutic adherence, leading to abandonment.

Conclusions:

This study suggests integrating maternal perceptions of cancer and diabetes with the messages used to elaborate languages for health education and caregiver training, to associate the healers to the early screening of cancer and diabetes, and to their educational, preventive and therapeutic care. Also suggested by this research is consideration of the relational dimension as a care service, and maternal perceptions as an illness that will need to be treated like cancer and diabetes.

Key messages:

- Associate the healers to the early screening of cancer and diabetes, and to their educational, preventive and therapeutic care.
- Considering relational dimension as a care service, and maternal perceptions as an illness that will need to be treated like cancer and diabetes.

From the experience of planning a life with diabetes to the mechanisms of the management of illness

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Background:

In the context of chronic diseases, it is now recognized that experiences of planning a new life with diabetes are very informative, and are a source of knowledge that can be used to improve patient care and quality of life. However, the professionals in health and the patients' therapeutic education are still struggling to translate this knowledge into their practices or to make use of it, as long as its forms remain largely unknown and it is not known how to identify these. Objective: The study aims to identify these knowledges and to report on how it is produced, based on an analysis of the experiences of diabetic patients in Yaoundé, Cameroon.

Methods:

The study combines a phenomenographic approach aiming at ethnographing the form and contents of lessons learned from life experiences with diabetes; and an operation of reflexive ethnography centered on the patient, apprehending the process of elaboration or production of these teachings. It includes six diabetics selected from the typical sampling method. The data collected were analysed using paradoxical analysis and interpreted in a pragmatic perspective.

Results:

The results reveal various mechanisms of self-management of the disease and stigma, developed by patients, such as: identity recomposition; valorization of treatment by promoting its benefits to others; control of information about one's illness oscillating between concealment and disclosure; therapeutic adjustments according to the life situations or interactions; rearrangement of individual and family habits; listening and decoding of the language of illness, body and the effects of food on the body; learning of conceptualized knowledge about diabetes and nutrition through various sources of information.

Conclusions:

the study suggests that these mechanisms should be considered as relevant forms of knowledge; and the should be used to improve both preventive, therapeutic and educational practices and the quality of life of the diabetics.

Key messages:

- The mechanisms of self-management of diabetes and stigma develop by diabetics trough their experience of planning a new life with diabetes should be considered as relevant forms of knowledge.
- These mechanisms should be used by health professionnals and patients' education professionals to improve their practices and the quality of life of diabetics.

Preventive actions for the gradual reduction of excessive salt intake and its monitoring in Italy

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Issue:

The WHO Global Action Plan for the Prevention of NCDs recommends a 30% relative reduction in mean population intake of salt/sodium. To this end, the Italian Ministry of Health (MoH) has strengthened prevention and health promotion through the ''Gaining health: making healthy choices easy'' Programme and the National Preventive Plan (NPP) 2014-2019, with the collaboration of the Interdisciplinary Working group for Salt Reduction in Italy (GIRCSI).

Description of the problem:

According to the ''Gaining Health'' Programme, agreements between the MoH and the associations of artisan bakers and food industry companies were signed since 2009 to reduce the salt content in bread and in other food products. The reduction of excessive salt intake is one of the main objective of the NPP 2014-2019 pursued by the Regions through initiatives as local inter-sectors agreements and information activities for the population and training for food sector operators. The Italian Institute of Health conducts national surveys to estimate habitual salt intake in the general adult population by collecting 24h urine. Baseline assessment was in 2008-2012 from random samples of persons aged 35-79 years, resident in all 20 Regions. A new survey is ongoing (2018-2019) involving persons aged 35-74 years, resident in 10 Regions. Surveys are funded by the MoH-CCM; urinary sodium excretion is effected by a central lab at Federico II University of Naples, subjected to strict quality controls.

Results:

The baseline survey showed a mean sodium excretion of 10.6 g/24h (95% confidence interval 10.5-10.8) in 1963 men and 8.2g/24h (8.1-8.4) in 1894 women. Results of the ongoing survey are expected in the coming months.

Lessons:

In Italy preventive actions of salt reduction supported by the MoH have been implemented. Estimation of salt intake in diet by 24h/urine is included. Results of baseline and on-going surveys will allow to estimate the possibility of meeting the WHO salt reduction target by 2025.

Key messages:

- In Italy inter-sectors preventive actions of salt reduction are implemented.
- Results of the baseline and on-going surveys will allow to estimate in Italy the possibility of meeting the WHO salt reduction target by 2025.

Predicting musculoskeletal disorders risk using tree-based ensemble methods

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Background:

Musculoskeletal disorders (MSD) can cause short-term disorders and permanent disabilities which may all result in serious limitations in activities of daily living. According to the WHO, MSD are the second largest cause of disability worldwide. In France, preventing MSD became a challenge for both the sickness fund and the complementary health insurers as the MSD prevalence increased by more than 50% since 2003, the MSD representing more than 80% of the occupational diseases leading to sick-leaves or financial compensations in 2015.

Methods:

Data from the IRDES 2012 health and social welfare survey (ESPS, enquête santé et protection sociale) was matched with individual care consumptions from the French health insurance. The ESPS survey is a national representative survey including 23,047 CATI/CAPI interviewed individuals (participation rate: 66%). Respondents self-assessed their health status, including MSD among other health troubles. Prediction of MSD risk was designed as a supervised binary classification problem, with the help of Random Forest (RF) and Gradient Boosting Machine (GBM) methods.

Results:

Variable importance scores based on the squared error criterion over all trees were computed for the continuous and categorical variables supposed to be associated with MSD: the consumption of medicines, physiotherapists' and GPs' services, medical imaging, biomedical analyses, dental care, and sociodemographic features (occupation, age and income). Slightly better results were obtained with GBM compared to RF (overall test accuracy rate: 70% for both methods).

Conclusions:

Machine learning methods with merged survey and registry data may help health insurers to better identify the individual MSD risk and prevent the occurrence and the disabling consequences of MSD with the help of individualized prevention strategies.

This research is financially supported by Malakoff Mederic Humanis, life & health French insurance for employees and individuals.

Key messages:

- The use of machine learning methods may be of interest to improve the ability to predict the MSD risk and help to identify insured people whom individualized prevention strategies can be offered to.
- Matching survey and health insurance liquidation data improves the ability to identify people at improved risk of MSD and gives the opportunity to provide them resources to prevent and to cope with.

Mortality inequalities from major causes of death in Lithuania by education during 2001-2014

O Meščeriakova-Veliulienė

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Background:

The aim of the study was to evaluate mortality inequalities from major causes of death by education in Lithuania during 2001-2014.

Methods:

Information on deaths (aged 30+) from cardiovascular diseases (ICD-10 codes I00-I99), cancer (ICD-10 codes C00-C97), external causes (ICD-10 codes V01-Y98), and digestive system diseases (ICD-10 codes K00-K93) was obtained from Statistics Lithuania. Mortality rates from these causes were calculated by the level of education (high (post-secondary non-tertiary, tertiary) and low (unknown, preprimary or no education, primary, lower secondary, upper secondary)) per 100,000 person-years. For the assessment of mortality trends during 2001-2014, the Joinpoint regression analysis was applied.

Results:

During the analyzed period, mortality from all major causes was higher in the lower educational group ($p < 0.05$). The most prominent differences in mortality rates between educational groups were found from external causes and cardiovascular diseases. Mortality from cardiovascular diseases (by 2.22% per year), cancer (by 1.87% per year) and particularly from external causes (by 5.2% per year) declined in higher educational group ($p < 0.05$). In the lower educational groups mortality declined only from cardiovascular diseases (by 0.73% per year), however mortality increased from cancer (by 0.64% per year) and digestion system diseases (by 5.20% per year) ($p < 0.05$).

Conclusions:

Mortality from major causes of death in both educational groups changed unevenly during 2001-2014. In higher educational group mortality declined from cardiovascular diseases, cancer, and especially from external causes, while in lower educational group - just from cardiovascular diseases.

Key messages:

- In Lithuania, there are still significant inequalities in mortality from the major causes of death by education.
- Therefore, more attention should be paid for the improvement of the health of the population with lower education.

Prevalence of multiple sclerosis in the South of Italy based on healthcare administrative data

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Background:

Multiple sclerosis (MS) is an heterogenous disease whose prevalence varies in Europe. Hereby, we aimed to estimate prevalence of MS in the Campania Region of Italy.

Methods:

To identify individuals with MS living in the Campania Region of Italy, we extracted data from the following healthcare administrative databases: hospital discharge records, regional drug registry, and specialist outpatient visits from Jan-2015 to 3Dec-2017. Individuals alive on the 1-Jan-2018 were included to capture prevalence on this date. Age-sex standardised prevalence rates were calculated using the direct standardisation method; the European population in 2018 was considered as reference population. To assess differences in the prevalence ratios across the five provinces of the region, standardised morbility ratios (SMR) were calculated. To calculate 95% confidence intervals (95%CI) for the standardised rates, the Byar's approximation method based on the Poisson distribution was used.

Results:

We identified 5,361 individuals with MS (females 64.5%, age 45.6±12.7 years). Standardised prevalence rate per 100,000 people was 90.0 cases (95%CI = 87.60, 92.40) (112.07 for females [95%CI = 108.36, 115.88] and 66.20 for males [95%CI = 63.26, 69.25]). The SMR in the province of Naples, the most densely populated, was 0.90 (95%CI = 0.86, 0.96), whereas the highest SMR was found in the province of Salerno (SMR = 1.30; 95%CI = 1.23, 1.38), and the lowest in the province of Caserta (SMR = 0.89; 95%CI = 0.82-0.96).

Conclusions:

Prevalence of MS in the Campania Region is lower than previous estimates from smaller areas in the North of Italy, suggesting a longitudinal gradient. Differences within the Region could be explained by genetic/environmental background and healthcare organization (e.g., missing diagnoses). In the future, healthcare administrative databases could be used to monitor MS prevalence/incidence and to plan healthcare resource utilization.

Key messages:

- Prevalence of MS in the Campania Region is 90 cases per 100,000 people. It is lower than previous estimates from smaller areas in the North of Italy, suggesting a longitudinal gradient.
- Differences within the Region could be explained by genetic/environmental background and healthcare organization (e.g., missing diagnoses).

Improving participation of detained men in organised screening of colorectal cancer in Toulon

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In France, organised screening for colorectal cancer was set up in 2008. Participation rate was assessed in March 2014 at the prison of Toulon / La Farlède. On the 100 detained men aged 50-74 years old concerned by screening, only 3.9 % were screened. A project aiming at improving participation in screening while addressing specific difficulties related to prison settings (lack of privacy in cells, low socioeconomic and education status of the population, stronger exposition to risk factors for colorectal cancer) was launched in 2015 and has been yearly conducted since then.

How to improve colorectal cancer screening in a prison setting? How to organise a sustainable screening program? What proximity guidance should be provided to foster participation?

The program that was developed mainly consisted in awareness sessions and proximity guidance to testing. Among the 330 detained men targeted between 2015 and 2018, 165 men performed an immunologic test (57.9%) and 45 were excluded for medical reasons. Colonoscopy was performed for 10 of the 13 men with a positive result and lesions were detected for 9 men. Among them, one cancer, 6 high-risk polyps and 2 low-risk polyps were found. Those findings exceeded expected numbers.

Despite a small population sample, data revealed the benefit of the project in comparison with other participation rates: only 33.5% in France and 29.3% in the Var department (estimates for 2016-17 by Santé Publique France). Furthermore, we achieved a participation rate compliant with European recommendations establishing 45% as a minimum target.

The success of our program relied on the synergy between health prevention professionals screening organisers and prison medical staff. Strong involvement of each team constituted a real leverage for project to ensure effective proximity guidance for detained persons leading them to get screened.

Key messages:

- Awareness program adapted to prison improved participation in colorectal cancer organised screening.
- Proximity guidance helped to detect cancer and to improve medical care of detained persons.

Elevated fatty liver index as a risk factor for all-cause mortality in HIV-HCV co-infected patients

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Background:

Thanks to innovation in treatment, people living with HIV and/or HCV now live longer but are growingly facing non-communicable disease burden. HIV-HCV co-infected patients are at high risk of metabolic complications and liver-related events, which are both associated with hepatic steatosis and its progressive form, non-alcoholic steatohepatitis (NASH), a known risk factor for mortality. The fatty liver index (FLI), a non-invasive steatosis biomarker, has recently drawn attention for its clinical prognostic value, but has never been applied to HIV-HCV co-infected patients. We aimed at testing whether elevated FLI (≥60) was associated with all-cause mortality in co-infected patients.

Methods:

Our study is based on data from ANRS CO13 HEPAVIH, a French national prospective cohort of HIV-HCV co-infected patients. Socio-behavioral and clinical data from patients clinically followed-up were used in the analysis. Using a Cox proportional hazards model for mortality from all causes (983 patients; 4,432 visits), we computed hazard ratios associated with risk factors and confounders.

Results:

After multiple adjustment, individuals with FLI≥60 had almost double the risk of all-cause mortality (adjusted hazard ratio [95% confidence interval]: 1.91 [1.17-3.12], p = 0.009), independently of HCV cure (0.21 [0.07-0.61], p = 0.004), advanced fibrosis (1.77 [1.00-3.14], p = 0.05), history of hepatocellular carcinoma and/or liver transplantation (7.74 [3.82-15.69], p < 10-3), history of indirect clinical signs of cirrhosis (2.80 [1.22-6.41], p = 0.015), and HIV CDC clinical stage C (2.88 [1.74-4.79], p < 10-3).

Conclusions:

An elevated fatty liver index is a risk factor for all-cause mortality in HIV-HCV co-infected patients independently of liver fibrosis and HCV cure. In the present era of nearly 100% HCV cure rates, these findings encourage the more systematic use of non-invasive steatosis biomarkers to help identify co-infected patients with higher mortality risk.

Key messages:

- A FLI≥60 is strongly associated with mortality in HIV-HCV co-infected patients.
- FLI could be calculated routinely to identify most at-risk patients.

Ketoacidosis admission rate in type 2 diabetes mellitus patients from 2006 to 2015 in Abruzzo, Italy

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Background:

Diabetic ketoacidosis (DKA) is a potentially life-threatening but largely preventable complication of diabetes and is associated with significant health care utilization and expenditure. Whereas DKA is mostly related to type 1 diabetes, over recent years an increasing number of hospital admissions for DKA have been reported in adult subjects with type 2 diabetes. The aim of this study was to assess the trend of hospitalizations for DKA in adult patients with type 2 diabetes and its associated factors.

Methods:

A retrospective cross-sectional study was performed from 2006 to 2015 in Abruzzo region. Data were collected from hospital discharge records (HDRs) of type 2 diabetes adult patients with either primary or secondary diagnosis for DKA. Age-adjusted hospitalization rates were computed by gender and standardized on the regional population in 2006. A logistic regression model was implemented using the presence of DKA as dependent variable.

Results:

We identified 160,366 HDRs with type 2 diabetes. Out of them, 1611 (1.00%) were due to DKA. The hospitalization rates for DKA increased both for male +115.9 and female +142.8%, from 2006 to 2015. Associated factors of DKA were age ranging from 18 to 44 (adjOR = 4.17; 95%CI:3.27-4.31), uncontrolled diabetes (adjOR = 1.79; 95%CI:1.60-2.01), trauma (adjOR = 1.38; 95%CI:1.13-1.68), any infection (adjOR = 1.68; 95%CI:1.22-.2.33), liver disease (adjOR = 1.29; 95%CI:1.09-1.53), fluid and electrolyte disorders (adjOR = 2.09; 95%CI:1.09-1.53), psychosis (adjOR = 1.69; 95%CI:1.25-2.30).

Conclusions:

Hospitalization trends for DKA in adult patients with type 2 diabetes have been increasing and are associated with some comorbidities. Early screening, appropriate patients, families and communities education remain an important aspect of preventing an acute diabetic complication such as DKA.

Moreover, multimorbidity complicates the disease management and remains an open challenge for public health.

Key messages:

- This study addresses hospitalizations for DKA in adult patients with type 2 diabetes, an occurrence increasing worldwide for unclear reasons.
- For preventing DKA in type 2 diabetes patients, it is useful taking into consideration the known trigger factors, but it is also worthwhile improving the management of comorbidities in outpatients.

Management of COPD in Anhui Province: compliance with GOLD guidelines

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Background:

COPD is a major public health concern of global scope, especially in China. The Global Initiative for Chronic Obstructive Lung Disease (GOLD) guidelines are international and national recommendations to manage COPD. Little is known about level of adherence of COPD management among exacerbated COPD inpatients to GOLD guidelines in China. The current study aimed to compare COPD management (vaccination and treatment of COPD exacerbation) among hospitalized patients in Anhui Province with GOLD guidelines and identify risk factors influencing vaccination coverage and guideline-compliant care.

Methods:

A retrospective clinical audit of medical records was conducted in a hospital in Anhui Province in China, involving 1132 patients hospitalized with exacerbated COPD within 2016-2017. Descriptive analysis was conducted to evaluate compliance to GOLD recommendations (version 2017). Logistic regression was conducted to detect the association between guideline-consistent care and variables.

Results:

Extreme deficiency in the vaccination coverage (0%) was found. Regarding pharmacological management, some adherence to prescribing short-acting bronchodilators timely (43.5%) and prescribing long-acting bronchodilators (55.0%) was observed; nonetheless, only 26.1% of patients received systemic corticosteroids or antibiotics for the recommended duration (<7 days) and only 17.0% did not receive methylxanthines. Age, education level, occupational status and disease severity were independently associated with guideline-consistent treatment.

Conclusions:

The implementation of GOLD recommendations in Anhui Province was unsatisfactory. Interventions to increase the vaccination coverage among COPD patients and to optimize the treatment of COPD exacerbation are imperative, requiring efforts at the hospital and policy levels.

Key messages:

- This is the first clinical audit study investigating the COPD management among hospitalized COPD patients in China.
- The implementation of GOLD recommendations in Anhui Province was unsatisfactory.

Geographic disparities in bladder cancer incidence among men in the department of Bouches-du-Rhône

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Bladder cancer incidence is investigated in the department of Bouches-du-Rhône to provide answers to the population reporting an excess of cancer cases in industrial areas. The study aimed to describe the geographical variations of bladder cancer incidence among men and detect potential spatial clusters without point source specification.

Incident cases diagnosed between 2013 and 2016 were extracted from the departmental observatory of cancers REVELA13. Age-standardized incidence ratios (SIRs) were calculated for each commune and bayesian smoothed risk estimate based on the Besag, York and Mollie model were computed for incidence mapping. Morans'I, Potthoff-Whittinghill and Tango statistic tests were used to investigate global clustering and the spatial scan statistic of Kulldorf (SaTScan) was used to investigate local clustering. Analyses were adjusted on a French deprivation index, access to health-care services and population density.

During the study period, 1 735 cases of bladder cancers were diagnosed among men. The study found a spatial heterogeneity ($p < 0.01$) and aggregation ($p < 0.01$) but no spatial autocorrelation ($p = 0.09$). Bayesian smoothed SIRs were not related to the confounding factors studied. An over-incidence was observed in the communes located in the South East of the department including Marseille, the biggest city of the study area. SaTScan algorithms detected two significant high-risk clusters in the same area (RR = 1.50 and 1.38). Introduction of each confounding factors in spatial scan detection, changed slightly the shape of clusters and/or the value of the relative risk but not the location. None high-risk cluster was detected in the communes of the industrial area.

Spatial analysis provides a first answer to the population concerning an excess of risk of bladder cancer at commune level. However, more analysis should be led to identify etiological factors or common environmental exposure.

Key messages:

- Geographic disparities exist in bladder cancer incidence among men at a commune level in the department of Bouches-du-Rhône.
- Spatial analysis show excess of risk of bladder cancer in the south-east of the department including the urban area of Marseille.

The analytic hierarchy process as a holistic model for the assessment of dialysis centres

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Introduction:

Haemodialysis is one of the methods of renal replacement therapy which is most frequently used in Poland and in the world in patients with chronic and acute renal failure. Purpose: An attempt was made to have patients undergoing regular haemodialysis assess the results of activity of dialysis centres.

Methods:

64 patients (30 women, 34 men, age: 50.2 +/- 11.9 years) undergoing dialysis therapy in three selected dialysis centres in Poland were included in the study. A questionnaire correlated with the analytic hierarchy process (AHP) was employed for the assessment. The dialysis centres were assessed by the patients in the context of availability of services, communication between the medical staff and the patient and the

treatment used. Two sub-criteria were connected with each criterion, for which significance (priorities) indicating a dependent impact on the assessment of the quality of dialysis centres was calculated.

Results:

From amongst four domains of the assessment of dialysis centres, the patients rated medical care and nursing care the highest (w = 0.386), where medical care had significance equal to 0.455, and nursing care had significance equal to = 0.545. The next important part of the assessment of dialysis centres was communication between the medical staff and the patient (w = 0.321) and the treatment used (haemodialysis) (w = 0.155). Availability of services had the lowest significance (w = 0.138), including performance of examinations for kidney transplant and medical transport for haemodialysis.

Conclusions:

The assessment of dialysis centres using the AHP method should be part of the therapeutic process where one needs to emphasise the role of the patient in chronic nephrological care which translates into the quality of services provided by dialysis centres.

Key messages:

- The assessment of dialysis centres using the AHP method should be part of the therapeutic process.
- The patient's role and its good assessment in the treatment process is very important.

Nutritional and Rehabilitation goals in Acquired Brain Injury patients: a new decannulation protocol

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Background:

One of the first goals for the rehabilitation of patients with Acquired Brain Injury (ABI) is the removal of the tracheocannula: the aim is not only to allow respiration by airways and reduce respiratory complications but also to obtain rehabilitation of dysphagia and verbal communication: for this purpose from July 2017 the ABI unit of the Institute of Physical and Rehabilitation Medicine 'Gervasutta'' adopted a new decannulation protocol, recommended by the Italian Society of Physical Medicine and Rehabilitation (SIMFER).

Methods:

Clinical data of ABI patients with tracheal cannula from May 2014 were collected as both process and outcome indicators associated with the adoption of the new protocol were defined. ABI patients were therefore divided into two groups depending on whether they were treated with or without the new procedure. Data have been processed with ''Simple Interactive Statistical Analysis'' (SISA) software.

Results:

A sample of 141 patients with tracheocannula was analyzed; among these 57 (40.4%) were treated with the new decannulation protocol. No statistical significant differences were found between the two groups in terms of systemic or respiratory complications, Functional Independence Measure (FIM) or Level of Cognitive Functioning (LCF) at the entrance as well as for both the time (days) between entry or tracheotomy and decannulation. However decannulation rate is significantly higher when the new protocol is applied (OR = 1.8; 95% CI = 1.2- 9.8; p = 0.01) as the time (days) between entry and oral feeding resumption ($p < 0.001$; 95% CI = -10 - -34 days).

Conclusions:

The introduction of the new protocol has allowed the achievement of both nutritional and rehabilitation goals with a significantly faster oral feeding resumption and an increase of decannulation rate and. Further efforts are needed to support its use in the future, with the aim of further improving of either process or outcome performances.

Key messages:

- Promising prospects for the decannulation of patients with acquired brain injury.
- Achievement of nutritional and rehabilitation goals.

Health Literacy Profile and educational intervention as a prevention action for Type2 Diabetes

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Diabetes Type 2 is being categorized as a health crisis in Mauritius where 22.8% of the population suffers from it coupled with a 19.5% who are pre-diabetic. Government is already spending a huge proportion of the national budget in care of diabetic patients. Since one of the known means to better control diabetes is structured diabetes education, we tested the ''learning nests'' as a prevention measure for Type2 Diabetes. The ''learning nests'' is a structured health education programme which takes into account both biomedical and psychosocial dimensions which has already proved its effectiveness in other countries and it is theoretically based on socio-constructivism, social contextualization, empowerment and action planning.

Health literacy refers to the capacity to access, understand and use health related information to make appropriate health decisions. A concept which is highly correlated to the health outcomes of a population since it addresses necessary competencies to maintain oneself in good health.

The objectives of the educational sessions were to educate people on the risk factors of diabetes and at the same time these people can disseminate the knowledge acquired in their social environment. Six educational sessions were organized for 30 participants whereby the main eligibility criteria was age > = 18 years. A qualitative study was conducted with the participants to analyse the learning process as well as their health literacy competencies in terms of access, comprehension and evaluation of health information. The study was conducted before and after three structured educational sessions based on cardiovascular risks, Physical Activities and managing fat intake.

The findings show that these learning situations when contextualized can prove to be promising, in terms of health actions being undertaken by participants and improvement in health literacy competences in a middle-income country like Mauritius.

Key messages:

- Improvement of Health Literacy level can decrease the prevalence of Diabetes.
- Structured Health Education can help in improving health literacy.

Network of Vascular Centers in the Russian as a way to reducing mortality in the working population

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Over the entire period of the state program aimed at reducing mortality from circulatory system diseases initiated in 2008 the number of Vascular Centers has increased from 85 to 140.

According to the federal statistical observation form, the rate of Vascular Centers per 100 000 population increased 1.5 times from 0.066 to 0.095 in 2008 and 2017 respectively. As a result, the number of treated patients increased 6.3 times - from 53.1 to 327.3 per 100 000 population. During the analyzed period, the mortality rate of patients of Vascular Centers decreased from the average of 9.3% for all Vascular Centers in 2009 to 7.6% in 2017 ($\chi 2 = 248.6$, $p < 0.0001$) reflecting accumulation of experience of care delivery within the framework of the state program.

The majority of patients with myocardial infarction and cerebrovascular diseases received treatment in the Vascular Centers. In 2017, 76.6% of all patients were admitted to Vascular Centers. From 2008 to 2017, the mortality from circulatory diseases in urban males of working age decreased by 36.1% (from 354.6 to 226.6 per 100 000 population), while cardiovascular mortality in rural males decreased to a greater extent - by 41.0% (from 394.2 to 232.0). Female mortality from circulatory system diseases (the level of which was initially five times lower) decreased to a lesser extent: from 67.0 to 44.5 per 100 000 urban females of working age (1.5 times - by 33.6%), and was even more pronounced in rural females - from 90.8 to 55.4 (by 39.0%).

Therefore, along with the increase in the number of Vascular Centers the volume of specialized care including high-tech, increases while mortality decreases, reflected by the decreased mortality from myocardial infarction and other forms of acute ischemic heart disease. However, the activity of Vascular Centers did not affect the rate of mortality from cerebrovascular diseases in the Russian population.

Key messages:

- Through the activity of regional vascular centers since 2008 substantial reducing of patients' mortality was registered from myocardial infarctions and other acute forms of ischaemic heart disease.
- Mortality from myocardial infarction has decreased in the last decade faster than in the period up to 2009.

Prognostic value of the Diverticular Inflammation and Complication Assessment (DICA) classification

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Colonic Diverticulosis is one of the most common anatomic alterations found in the clinical practice. This condition has 60% incidence in the population over 60 years old. About 20% of patients with this condition will develop Diverticular Disease, and 5% of them will evolve into Diverticulitis. The aim of the study is to analyse the validation of the classification considering the distribution of the severity DICA score between the patients with diagnosis of colonic Diverticulosis.

We analysed and classified with DICA 5635 colonoscopies in the period between January 2012 and April 2018 and we obtained the Hospital Discharge Form from all the patients that had been admitted to the hospital in the same time period. The results showed that 69.9% of the patients were assigned to the score DICA1, 21% to DICA2 and 9.1% to DICA3. Ageing increased both the diagnosis of Diverticular Disease and the severity score. The severity was higher in female patients (DICA1 = 44.6%,DICA2 = 50.8%,DICA3 = 57.8%). The occurrence of complications overall was 5.4% and specifically: not complicated Diverticular Disease (DICA1 = 1%, DICA2 = 1.8%, DICA3 = 3.5%); not complicated Diverticulitis (DICA1 = 2.1%, DICA2 = 4.7%, DICA3 = 6.4%); Bleeding in Diverticulitis (DICA1 = 0.4%, DICA2 = 1.2%, DICA3 = 4.5%); Diverticular Perforation (DICA1 = 0.0%, DICA2 = 0.1%, DICA3 = 0.4%). The complications that needed a surgical procedure were for DICA1 about 0.2%, for DICA2 0.8% and for DICA3 2.5%. As well the average of the occupant days in the hospital and the cost, respectively, was for DICA1:8.5 days and 2300 €; for DICA2:9.5 days and 3080 €; for DICA 3:13 days and 4090 €.

The majority of the patients with Diverticular Disease belonged to the severity score DICA1 and the patients classified with DICA3 were mainly female and older than 69 years old. The study confirmed the prognostic value of the endoscopic classification DICA since the occurrence of complication resulted in a statistically significant relation with the score DICA3.

Key messages:

- DICA classification was able to discriminate, based on endoscopic records, the patients that could develop complications for Diverticular Disease.
- DICA classification is a valid parameter to predict the outcome of the disease, with great impact on public health improving the effectiveness of treatment.

Improving chronic diseases management using Learning from Excellence (LfE) model

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Background:

Learning from excellence (LfE) model demonstrated to be an effective method in the promotion of quality improvement in healthcare and in the reduction of patient's harm. We applied LfE to identify the best models that could represent the excellence in the management of chronic heart failure (CHF) patients among the models adopted among 98 healthcare providers across 10 Italian Regions.

Methods:

The research consisted of 2 phases: 1) the creation of a 9 indicators set to map CHF pathways and the analysis of these indicators through a quantitative approach using a modified positive deviance model which identified the best performers among our sample of hospitals and local health authorities (H/LHA) grouped in geographical Areas. We transformed 3 indicators (''tracking'' indicators) into a 0-5 scale to assure direct comparison. 2) The H/LHA best performers were asked to share their organizational and clinical model during a workshop where every stakeholder involved could take part.

Results:

Among the 10 investigated Italian Regions, 42 Areas were ranked and ranged 1,83-3,91. The three best performing areas that ranked above the 3rd quartile and were interested in taking part in this new approach were selected. The results arising from the qualitative analysis of these areas showed that communication, trust and shared goals among healthcare professionals resulted to play a key role among the best performing H/LHA. Indeed, the same role is played by all the policies and practices that enabled Interactions among healthcare workforce and patients, thus representing the 'integration of care'.

Conclusions:

The identification-celebration of best performers LfE implementation model holds the potential to promote quality improvement of processes among healthcare providers. This potential also unlocks in the chronic disease management field, making the sharing of best performers' experience possible at a Regional and National level.

Key messages:

- Learning from excellence model demonstrated to be an effective method in the promotion of best models in the management of chronic diseases.
- Communication, trust and shared goals among healthcare professionals resulted to play a key role among the best performing hospital and local health authority.

Diabetes in Israel- do all patients receive equal care?

Ronit Calderon-Margalit

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Background:

Diabetes Mellitus (DM) is associated with micro- and macrovascular complications, leading to high burden of morbidity and mortality. Populations of low socioeconomic position (SEP) in various countries were found to have increased prevalence of the disease, worse glycemic control, and increased complications. We aimed to examine whether there are social disparities in diabetes care in Israel, as reflected in a national program for quality indicators.

Methods:

The Israel National Program for Quality Indicators in Community Healthcare obtains data from electronic medical records from all health plans, covering the entire Israeli population. In 2017, 497,397 individuals aged >18 years were identified with DM. DM prevalence, quality of care indicators, including process and intermediate outcomes were explored by SEP categories (1-10), determined according to residential addresses.

Results:

DM prevalence in Israeli adults in 2017 was 9.7%, showing a strong SEP gradient, with higher prevalence in individuals of lower SEP. No SEP disparities were observed in process indicators with overall rates of documentation of hemoglobin A1c (HbA1c) of 90.9%, ophthalmologic examinations of 72.5%, and kidney function examinations of 92.5%. However, strong SEP disparities were observed in the prevalence of uncontrolled diabetes (HbA1c$\geq$9%), with an overall rate of 10.0%, and a 5.4-times higher rate in diabetics of the lowest SES level (23.5%) compared with the highest SEP level (4.3%). A somewhat weaker gradient was seen for the well-control of DM (HbA1c<7-8%, according to duration of disease and age), with an overall rate of 69.7%, and a 1.7 ratio, comparing diabetics of the highest vs the lowest SEP level.

Conclusions:

These findings suggest that access to care does not explain SEP disparities in diabetes control in Israel. There is a need to explore the underlying social, cultural, and possibly the benefits-policy determinants of poor control among individuals of low SEP.

Key messages:

- Wide socioeconomic disparities are present among Israeli adults in diabetes mellitus prevalence and control rates, but not in care processes indicators.
- These findings call for a deeper understanding of the determinants and perhaps a revision of current social benefits policy, which may encourage lack of glycemic control.

Leadership and chronic diseases: a bibliometric review

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Background:

Leadership and chronic diseases are two frequent topics in current public health discussions. We performed a bibliometric analysis to study what interactions exist between these two themes. This study allows an insight on what is being published and also identifies potential gaps that need to be addressed.

Methods:

We have reviewed all the titles and abstracts of articles available at PUBMED with the MESH terms 'Leadership' and 'Chronic Disease'. We collected information about the authors, year, journal and type of publication and country where the study was done. We have also done a qualitative analysis on the themes addressed.

Results:

We have found 171 entries, of witch 85 (49,7%) referred to apparent peer reviewed studies in English. All other publications referred to editorials, commentaries or the PUBMED entry did not allow for greater clarification. From 1998 the publication of articles became regular, with a peak of 14 articles published in 2014. The average of authors per publication was 3,19. The most frequent country involved was the USA (62), follow by the UK (14), Canada (11) and Australia (10). 128 publications were identified, of which BMC Health Serv Res was the one with the highest number of articles included (5). There was some form of a call for greater leadership from nurses in 22 articles. We also highlight 5 articles that called for a greater role of pastors and religious communities in this field.

Conclusions:

Despite the perception of being common topics, there is still a low rate of publication of studies in the field of leadership and chronic diseases. There is a predominance of articles from the USA. There was not a predominant publication in this field. Despite doctors being typically seen as the leaders within the health field, the articles included seem to point to a trend in calling for a bigger leadership role of other actors, such as nurses.

Key messages:

- There is a need for more research in the field of leadership in chronic diseases.
- There seems to be a trend calling for greater leadership in the field from non-physician actors.

Factors associated with patient activation in a Turkish population with diabetes and/or hypertension

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Background:

Patient activation (PA), which is known to improve health outcomes, describes the knowledge, skills and confidence a person has in managing their own health care. We investigated the extent of PA and associated factors in adults with diabetes (DM) and/or hypertension (HT). This study is the first in Turkey evaluating PA, using the Patient Activation Measure (PAM) scale. The results of the study provide practitioners with information on the characteristics of patients who need support to increase their activation.

Methods:

We conducted this cross-sectional study in 14 Family Health Centers in Istanbul. The participants were DM and/or HT patients. A questionnaire including the PAM, questions on patient characteristics, life style behaviors, healthcare utilization and health status was applied to 431 patients. Based on PAM score, patients were classified into two activation levels: level 1-2 (poor activation) and level 3-4 (good activation). $\chi2$, t-test and logistic regression (LR) analysis were used. LR analysis was performed for all participants and for women and men separately.

Results:

Of 431 patients (mean age: 63.6), 65% were women; 45% had a poor activation level (PAL). Based on LR analysis; low socioeconomic status (SES) (OR = 1.6; 95% CI:1.01-2.5), being illiterate (OR = 3.9, 95% CI: 1.5-10.7), being primary school graduate (OR = 2.1, 95% CI:1.1-4.2), lack of adult vaccination (OR = 1.9, 95% CI:1.1-3.1), higher BMI (OR = 1.1, 95% CI: 1.09-1.13) and worse self-reported health (OR = 1.2, 95% CI: 1.1-1.3) were factors associated with low PAL. The latter was associated with low PAL for both sexes; high BMI was an associated factor only among women, while low SES and lack of vaccination were factors only in men.

Conclusions:

Almost half of the patients had low activation level in our sample. Associated factors may serve as the basis for the development of interventions needed to enhance activation for patients with DM/HT.

Key messages:

- Low patient activation is associated with low level of education, low SES, high BMI, lack of vaccination and worse self-reported health. The factors associated with patient activation vary by gender.
- A qualitative study with patients having different levels of activation would be useful to understand the underlying motivations.

Participatory approach in developing the long-term care strategy in Slovakia

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Issue/problem:

In Slovak Republic (SR) old-age dependency will rise rapidly in the near future and will more than double in the next 15 years. This profound demographic changes will require restructuring of health and social care systems with more people working in the long-term care (LTC) sector and most likely a higher level of public spending to cover the growing LTC needs.

Description of the problem:

Providing LTC in Slovakia has many problem areas. It is governed by several acts and regulations, which are not always linked and sometimes do not cover the situation entirely. There is not coordinated and integrated LTC model implemented and the distribution of the roles between the health and social care systems is lacking.

Results:

Since 2017 a policy dialog between the key stakeholders - the Ministry of Health of the SR; the Ministry of Labour, Social Affairs and Family of the SR; and civic societies led by the Association for the Patients' Rights Protection has been in place with aim to improve the current LTC Strategy Proposal. Online survey was carried out in May - June 2018, which brought deeper insights into the needs regarding demand and supply, and uncovered the main limitations of the current LTC system, e.g. insufficient capacity of LTC beds or a malfunctioning information system. This was followed by six workshops for professional and lay public, organised between February and March 2019 with aim to collect further evidence on regional level.

Lessons:

The LTC Strategy Proposal development is one of 12 pilot projects within the national project - Promoting partnership and dialogue on participatory public policy making in SR. The initiative takes into account the needs and demands of LTC target groups and will serve as a starting point for further action in this area. [Grant Support: APVV-15-0719].

Key messages:

- In Slovakia, a complex solution of long-term care issues is essential.
- Developing the LTC Strategy Proposal through participatory approach is an important starting point for future action.

Rising prevalence of diabetes: evidence from the national registry in North Macedonia

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Background:

Disease reporting and data collection are key tools for the health care systems in order to identify opportunities to address burden of diseases. The country's diabetes patients register was the first registry to be integrated with the e-health system in North Macedonia in 2017. We aimed to estimate type 2 diabetes mellitus prevalence and effectiveness of diabetes control as one of the proposed national priorities in tackling the non-communicable diseases.

Methods:

Cross-sectional descriptive study was conducted on patients entered in the National Diabetes Register in 2017/2018. Patients' socio-demographic and anthropometric characteristics in association with diabetes' complications and outcomes were determined by Pearson correlation coefficient ($P < 0.0001$, 95% CI).

Results:

This study identified a total of 35541 patients with a diagnosis of diabetes, out of which 32888 with type 2. This corresponds to a prevalence rate of 1583.9 per 100,000 population. The prevalence increased with age (65+) and was higher among females than males (56.8% vs. 43.2%). Over 80% of type 2 patients were overweight out of which 34.5% obese (BMI>30kg/m2). Diabetic retinopathy is reported as first diagnosed complication in diabetic patients, followed by neuropathies and vascular complications. Patient's low level of education and higher BMI were associated with increased number of early and late-onset complications.

Conclusions:

Evidence accumulating suggests high burden of complications in type 2 diabetic patients, indicating that the patients understanding of diabetes care, treatment adherence and healthy lifestyle are important topics to be address by health professionals in order to avoid complications and premature deaths in people with diabetes.

Key messages:

- Integrated reporting of non-communicable diseases and risk factors is needed to complete current information gaps, from completeness of data to quality and comparability.
- The action plan for chronic diseases should specifically address diabetes control, as most of the patients with diabetes have high prevalence of comorbidities, complications and unfortunate outcomes.

Clustering & trajectories of multimorbidity across the lifecourse: a 70 year birth cohort study

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Background:

Multimorbidity ($\geq$2 chronic diseases) is increasingly prevalent in ageing populations and presents a public health challenge in successful disease management. Most evidence for multimorbidity at different ages comes from cross-sectional data, hindering understanding the extent and types of multimorbidity across the lifecourse, how they develop and associated risk factors. The aim of this study is to investigate the clustering and patterning of multimorbidity over the lifecourse using one of the longest running national birth cohort studies.

Methods:

This ongoing study is based on the National Survey of Health & Development (NSHD), a birth cohort study following 5,362 individuals born in 1946 with detailed sociodemographic and clinical data collected from 22 waves across the lifecourse till date. This study will investigate the trajectories and clustering of 24 diseases (physical and mental health) and potential differences by sex and socioeconomic status using mixed-effects linear spline modelling.

Results:

Preliminary analyses indicate that as expected, the rates of many conditions increase with age (e.g. 13% obese at age 43 to 31% at age 69), increasing the likelihood of individuals suffering from multiple conditions with age. At age 63, 73% with diabetes had hypertension, increasing to 85% with hypertension at age 69. We will estimate longitudinal trajectories of multimorbidity for individuals and whether the age of onset and rate of accumulation vary by sex, life-period and SES. Given the longitudinal nature of the data, we will investigate the extent to which multimorbidity earlier in the lifecourse predicts the rate of further multimorbidity later in the lifecourse.

Conclusions:

Understanding patterning and trajectories of multimorbidity over the lifecourse and associated inequalities will better inform health care provision planning including appropriate window periods for intervention, specifically for the disadvantaged at higher risk of high multimorbidity.

Key messages:

- This is the first study to investigate trajectories of multimorbidity with data from birth to old age.
- Understanding how early life factors predict later life multimorbidity will better inform healthcare planning.

Evaluating the effectiveness of a screening program for cardiovascular diseases in Kazakhstan

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Background:

Cardiovascular diseases (CVD) occupy leading positions in the mortality of the Republic of Kazakhstan (RK). In RK CVD screening is performed with 40-years of age. Objectives: to evaluate the effectiveness of screening over time.

Methods:

We conducted a survey of 121 patients with CVD, identified on screening.

Results:

The average age patients in survey-54.3 [95% CI: 52.64;55.96], of which 38% are men and 62%-women. Fact smoking mark 64 persons (52±8), alcohol-(37.2±11.6), family history-66 (54.5±8.1) daily physical activity-34 person (28.1±14.3). Middle systolic blood pressure (BP) is 144.3 [95% CI: 141.61;146.99] and diastolic BP 90.2 [95% CI: 89.02;91.38] mm.Hg. Most of the respondents have different degrees of obesity. The average BMI is 31.8 [95% CI: 30.93;32.67]. The average waist size is 89.1 [95% CI: 86.88;91.52], with the waist size of women over 80 cm (91.9 [89.03;94.77] and the waist size of men 86.1 [82.31; 89.89]. Mean values for total cholesterol of 5.9 [95% CI: 5.85;5.95]. To evaluate the effect of various factors on the increase in BP, we calculated the analysis of variance. According to our calculations, gender does not affect BP, however, age, BMI and waist size affect.

We interviewed patients for complaints, analyzed outpatient cards, a check-up journal: chest pains or interruptions in the heart during exercise are noted by 25 people (20.7±17.5), improvement of the subjective state-29 (24±15.9), regularly receive basic therapy-59 (48.8±9.1), call the ambulance team-43 (35.5±12), are urgently hospitalized for a year-31 (25.6±15.2) and 7 person participate in the school of CVD. There is a statistically significant relationship between gender and smoking, gender and alcohol, gender and regular intake of basic therapy at a significance level of $p < 0.05$.

Conclusions:

Identifying the low effectiveness of CVD screening over time requires the revision of a comprehensive training program for doctors-nurses and the public.

Key messages:

- Patients in Kazakhstan generally do not change their lifestyle after screening for a disease.
- The effectiveness of the screening depends on the teamwork of the doctor, nurse and patient.

Metabolic complications of obesity

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Background:

Obesity, through its numerous complications, influences the functional and vital prognosis, especially in situations of massive or morbid obesity. The aim of our study was to study the metabolic complications associated with obesity.

Methods:

This was a descriptive cross-sectional study carried out in the first half of 2018 involving 100 obese patients attending the Obesity Unit of the National Institute of Nutrition in Tunis. Each patient received a complete clinical examination with a standard biological assessment. Obesity is defined by a body mass index $\geq$ 30 Kg / m2.

Results:

The average age of our patients was 45.08 ± 13.9 years with a female predominance of 88%. The average weight was 103.76 ± 17.9 Kg. The average BMI was 38.95 ± 5.72 Kg / m2. The average waist circumference was 123.88 ± 13.13 cm and the average fat mass was 45.98 ± 12.22 kg. Twenty percent of our population was diabetic with an average duration of progression of 6.6. ± 4.04 years. The prevalence of dyslipidemia was high in morbidly obese patients with a rate of 18.6% compared to moderate to severe obesity at 6.4%. Arterial hypertension was noted in 33% of our population. The presence of moderate sleep apnea syndrome was noted in 31.3% of cases. Hyperuricemia was found in 8.6% of cases. Rheumatologic complications were marked by gonalgia in 26% of cases and low back pain in 6.8% of our patients.

Conclusions:

Screening for complications related to obesity is necessary and essential for the comprehensive care of the obese person. Their treatment must be specific and it should not be limited to weight loss.

Key messages:

- Obesity.
- Metabolic complications.

Validation of a national algorithm for diabetes screening

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Background:
The continuing upward trend in diabetes diagnosis across the world has led governments to adopt new treatment programs. According to the International Federation for Diabetes (2017) Europe and in its Member States spent from 10% to 20% of healthcare costs, for diabetes. The purpose of this study is to assess the feasibility of an algorithm to identify both the regulatory needs of diabetic individuals and to screen for undiagnosed individuals in the community.

Methods:
The population sample consisted of 2100 people. The survey was conducted in two phases over the period 2017-2018. In the first phase we identified the 188 already diagnosed people with diabetes who were asked to answer a questionnaire comparing their current standard of care to NICE indicators. In the second phase, the remaining 1912 non-diabetic patients were asked to answer the Findrisk questionnaire. Those who were classified as high risk and very high risk were selected and referred to a clinical laboratory where they were subjected to a glucose curve to detect any diagnosis.

Results:
The diabetes prevalence at the onset of the study was 9% (188/2100 people). Fifty-two new incidents were diagnosed. Thirty-six new cases were diagnosed by randomized glucose values after triple check and symptomatic diabetes symptoms consistent with the World Health Organization's recommendations on diabetes diagnosis. Sixteen new cases were diagnosed via OGTT. The prevalence of diabetes at the end of the survey reached 11.4% (240/2,100 people)..

Conclusions:
It has been found that one person in every forty in the general population suffers from diabetes without been yet diagnosed. Deviations from international diabetes standards have been observed. A new diabetes strategy should be implemented in the future, allowing the catholic implementation of the Findrisk Diabetes Prevention tool every ten years.

Key messages:
- Despite existing guidelines and recommendations, very few diabetic patients fulfill NICE follow up criteria.
- FINDRISK and OGTT can be used as part of a cost-effective national diabetes screening algorithm.

Breast Cancer burden in Tunisia: situation in 2017 and projections by 2030

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Introduction:
Despite advances in diagnostic and treatment of cancer, burden of this disease is increasing worldwide. Breast Cancer is one of the leading cancers and major causes of death among female worldwide. The aim of this study was to describe the breast cancer burden in Tunisia in terms of disability adjusted life years (DALY) in 2017 and to perform projections by 2030.

Methods:
DALYs for cancer are the sum of years of potential life lost due to premature mortality (Years Life Lost (YLL) and the years lived with disability (YLD). We used epidemiological data (incidence rate, death rate, DALY, YLL and YLD) estimated by the Institute for Health Metrics and Evaluation (IHME). Demographic data were provided by the National institute of statistics. The projection of DALYs for breast cancer through 2030 was performed by a Poisson Regression analysis with Age -Period -Cohort (APC) using SPSS software while using IHME estimated data for the period 1990-2017.

Results:
In 2017, breast cancer incidence and mortality rate among females in Tunisia were 50.17/100000 persons years and 14.04/100000 persons years respectively. Breast cancer DALY values were 25145 (438 /100000 persons years). The percentage of YLL in DALYS was 92.4%. Without effective interventions, the number of DALYs due to breast cancer would reach 40071 in 2030 with a standardized rate of 507/100000 persons years (IC 95% = [501/100000 to 514/100000]. The number of YLL predicted will attain 36457 with a standardized rate of 461/100000 persons years.

Conclusions:
The burden of breast cancer among Tunisian women in 2017 is relatively high mainly due to the lack of screening program. There is an urgent need of a strong plan of early detection and appropriate care.

Key messages:
- Burden of breast cancer among women in 2017 is high and will rise in 2030.
- Renforcing screening program is urgent.

Current and future burden of prostate cancer in Tunisia projections to 2030

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Introduction:
Prostate Cancer is the second most common cancer among men worldwide. Current and future estimates on the burden of cancer are needed. The aim of this study was to assess prostate cancer burden in Tunisia in terms of disability adjusted life years (DALY) in 2017 and to perform projections by 2030.

Methods:
DALYs for cancer are the sum of years of potential life lost due to premature mortality (Years Life Lost YLL) and the years lived with disability (YLD). Estimated data related to Burden of disease (Incidence rate, death rate, DALY, YLL and YLD)are obtained by the Institute for Health Metrics and Evaluation (IHME). Demographic data were provided by the National institute of statistics. The projection of DALYs for prostate cancer through 2030 was performed by a Poisson Regression analysis with Age -Period -Cohort (APC) using SPSS software, while using IHME estimated data for the period 1990-2017.

Results:
In 2017, prostate cancer incidence rate and mortality rates among males in Tunisia were 24.17/100000 persons years and 7.08/100000 persons years respectively. Prostate cancer DALY values were 6548 (114 /100000). The number of YLLs was 5712 with a higher contribution of YLL in DALYS (87.2%). Without effective interventions, the number of DALYs due to prostate cancer would reach 10105 in 2030 with a standardized rate of 113/100000 persons years (IC 95% = [110/100000 to 116/100000].

Conclusions:
The burden of prostate cancer in Tunisia in 2017 is relatively high and will still rising until 2030. This highlights the urgent need to focus resources on disease prevention and in the improvement of treatment.

Key messages:
- The burden of prostate cancer is high in Tunisia in 2017.
- Need to focus ressources on disease prevention and in the improvement of treatment.

Lung Cancer burden of disease in The Northern Tunisia

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Introduction:
Lung Cancer is one of the leading cancers and major causes of death among men worldwide. Current estimates on the burden of cancer are needed to plan and evaluate cancer control policies. This study aimed to estimate the lung cancer burden in Northern Tunisia in terms of disability adjusted life years (DALY) from 2007 to 2009.

Methods:

DALYs for cancer are the sum of years of potential life lost due to premature mortality (YLL) and the years of productive life lost due to disability (YLD).We calculated YLL by multiplying the number of deaths by the standard life expectancy at that age using the mortality data of the Global Cancer statistics 2012 (Globocan 2012) and the population data provided by the National institute of Statistics. We used the model life-table West with a life expectancy at birth of 82.5years for women and 80 years for men.YLD were computed by multiplying the number of new cases by the average duration of the disease calculated with the DiSMoDII software. The disability weight employed was 0.917 for lung cancer; a discounting rate of 0.03 was applied. The Incidence data were obtained from the Cancer Registry of the North region of Tunisia 2007-2009.

Results:

The incidence rate of lung cancer in the northern region of Tunisia between 2007 and 2009 was 28.8/100000 persons years for males and 3.1/100000 persons years for females. Lung cancer death rate was 27.8/100000 persons for males and 1.65/100000 persons for females. Lung cancer DALY values were 10404 for males (410/100000) and1251 for females (50/100000). The percentage of YLL in DALYS was 93.3% for males and 51.7 % for females. The highest proportion of YLL was observed for the age group 60-69years for both sexes.

Conclusions:

The burden of lung cancer especially among males is very important. This highlights the importance of promoting the preventive measures such as the Tobacco control including tobacco cessation.

Key messages:

- Burden of lung cancer among male is very high in Tunisia.
- Importance of promoting preventive measures such as tobacco control.

DG Environment, climate and health / Urban health

Organizing the institutional Public Health response to heat under climate change: A scoping review

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Background:

Extreme heat events are a major health risk, and their intensity and frequency are expected to increase under climate change. Heat health action plans (HHAP) aim to prevent adverse health effects through measures such as warning systems or communication campaigns. This scoping review asked whether the peer-reviewed Public Health literature suggests evidence for good practice governance of HHAP.

Methods:

Databases PubMed and Web of Science were searched using search string combinations of heat, policy, warning system, and related terms. Data was extracted into a pre-defined extraction table based on theory-driven variables related to responsibilities, processes of stakeholder involvement, evaluation and whether good practice advice was provided. Findings were narratively synthesized and gaps in the current knowledge evaluated from a normative standpoint.

Results:

Searches resulted in 6681 hits. After title, abstract and full text screening, 20 articles were assessed, 11 from Europe and 9 from other regions. Findings on structure of governance revealed that the Ministry of Health or Ministry for the Environment leads the development of an adaptation plan or HHAP guidance, while locally Departments of Health most often lead coordination of actions. Interagency cooperation was reported as essential, while in the majority of included studies the public are perceived as recipients of advice and warnings rather than as active stakeholders. Tailoring national guidance to local contexts as well as raising awareness of the plan not only among the public but also among all levels of management was one suggested good practice.

Conclusions:

Few articles explicitly examine the organization of HHAP and no conclusions about whether a specific approach is superior can be drawn from these studies. To adequately protect human health from extreme heat events, an assessment of whether current governance structures are able to provide effective heat health action could be useful.

Key messages:

- The peer-reviewed literature does not provide information on which type of HHAP governance is superior.
- In the absence of a gold standard, it should be assessed what stakeholders and discourses are absent from HHAP governance to ensure vulnerable groups are adequately addressed by HHAP.

Environment and Health: Official knowledge and lay response

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Due to its history, Halton, United Kingdom, provides a natural experiment to investigate the divide between lay and official knowledge about environment and deprivation, and how these may influence health choices and outcomes. 55 semi-structured interviews were carried out to assess a cross-section of residents' perceptions and experiences of health, environment and lifestyle, taking a life history approach to examine health over time, and how choices were constructed. These were analysed for themes using a structuration theory approach. Residents' viewpoints were then presented to twenty local public organisation officials, with their own perceptions also discussed. The overall standpoints were very different to those expressed by residents, being based on quantifiable knowledge such as that gained by officially collected statistics. Residents were not only sceptical about the knowledge presented by public health organisations, but valued lay knowledge gained through observation and experience. Official knowledge was interpreted primarily via an analysis of why this knowledge was created rather than an assessment of the knowledge itself. The interpretation was formed by a perception amongst residents that lay fears about pollution were being, at best, downplayed or, at worst, discounted by 'the powers that be' who, in turn, placed faith in checks carried out by other official bodies. Official knowledge represented an expression of vested interests, presented by superordinate and external agents. A feeling of disempowerment co-existed alongside a perception that there was access to a form of truth via observation and experience rather than empirical knowledge. Whereas scientific information was discredited, lay knowledge was seen to be a more reliable guide as it remained free from a perceived bias. A degree of agency could be exercised perhaps only in this perception of 'pure', if unprovable, knowledge.

Key messages:

- Formulation of official knowledge and reception of issued messages by lay residents in an area of high deprivation and compromised environment.
- Factors influencing perception, and adoption, of health messages which may impact on health and well-being in a local population.

Citizens' perceptions of the health-related neighbourhood environment in Limassol, Cyprus

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Background:

''Place'' can impact on health and quality of life. There is a growing interest in neighbourhood audits. In the context of developing the CyNOTes audit tool, a residents' perception of the neighbourhood environment survey was performed.

Methods:

A systematic random sample of ten adult residents (N = 150) across a stratified sample of fifteen neighbourhoods according to educational attainment as per census data responded to the ''Place Standard'' tool which assesses 14 aspects of the physical, built and social neighbourhood environment. Neighbourhoods were also audited using the 126-item CyNOTes.

Results:

Three in four participants were home owners and lived in the neighbourhood for over 10 years. With the exception of ''identity and sense of belonging'' (M = 5.8, SD = 2.0) and ''opportunities for social interaction'' (M = 5.3, SD = 2.1), physical and built aspects of the environment were rated close to the middle point on a scale 1: large to 7: little room for improvement. ''Parks, playgrounds and green space'' and ''garbage, animal droppings and other physical disorder'' were the most commonly mentioned priorities for action in the free text by one in three participants. The lowest score was recorded for ''influence and sense of control'' (M = 3.4, SD = 2.4). While on a 1-10 subjective perception of neighbourhood position, residents in lower education neighbourhoods gave a rating of 6.6 on average compared to 8.1 in the higher group, they tended to rate aspects of their neighbourhood more favourably. Even though the audit revealed a systematic pattern of less favourable conditions along the socio-economic continuum, the perception survey revealed a U-pattern with residents in the middle category more likely to give less favourable ratings.

Conclusions:

The extent to which perceptions surveys may be affected by differential expectations across social groups is not clear. Neighborhood audits provide supplementary profiles of ''place'' independent of the perceptions of residents.

Key messages:

- Based on the Place Standard tool, Limassol residents' rate social aspects of their neighbourhood environment more favourably than aspects of the built and physical environment.
- Neighbourhood observed-based audits, independent of residents' perceptions surveys can supplement each other in city health profiling.

''Is anyone walking in our neighborhoods?'': Citizens' experience of the neighbourhood environment

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Background:

Several generic or feature-specific neighbourhood audit tools have been developed in recent years. In the context of developing the Cyprus Neighbourhood Observation Tool for auditing urban environments (CyNOTes), a virtual ethnographic study of citizens' perceptions of their neighbourhood environment was performed.

Methods:

The municipality and mayor's Facebook were reviewed for posts related to neighbourhood environment over a 12-month period (e.g. regeneration projects). Comments were content analysed using a deductive as well as an inductive approach to gain an in-depth understanding of citizens' perceptions of neighbourhood environment.

Results:

348 comments to 27 relevant posts were identified. The unit of analysis was sentences or short phrases and 289 CMU were identified. The central theme was ''Citizens' voice''. Six themes and several sub-themes emerged. ''Comparisons'' to contrast the differing conditions between high-profile locations versus ''left out'' residential neighbourhoods (''Yes, the city centre, the waterfront is a jewel, what about the neighborhoods?'') or to compare their experience to ''another place-another time''. They express ''Mixed feelings'' ranging from ''hope'' to ''disbelief'' about proposed actions. Citizens are referring to ''Consequences'' of neighbourhood adverse environment on ''Quality of Life'' or ''Local ecomomy and housing'' and identify ''Causes'' in ''Money and Power'' or ''Lack of vision and planning''. They are placing ''Responsibility'' in both ''Authorities' inaction'' as well as ''Everyone's role''. ''Suggestions'' included measures related to ''Law and Order'' as well as ''Citizens' participation''.

Conclusions:

Citizens voice their experiences of the neighbourhood environment lack of influence and control and demand for more involvement in decision-making. They blame authorities for neighbourhood problems but also recognize the lack of individual responsibility, suggesting policing and punitive measures and stronger collective action.

Key messages:

- A virtual ethnographic study of citizens' comments on social media offers an in-depth understanding of the neighbourhood experience.
- Citizens want to have a ''voice'' to express their concerns about neighbourhood problems as well as to participate in decision-making.

Identifying barriers to organizational health literacy in public health departments in Germany

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Background:

To master challenges to their environmental health, people have to have health literacy (HL). At a national and communal level, focus is shifting from individual HL to health care organizations. They have to raise their organizational health literacy (OHL) to help their users to access information and services. In Germany, public health departments are responsible for environmental health at a population level while the environmental administration is responsible for health-related environmental protection. To date, there is no research on the

OHL of public health departments in Germany. Which are the barriers that keep public health organizations from raising their OHL as well as from making better use of possible synergies with the environmental administration?

Methods:

The study consisted of interviews with experts from public health (n = 7) and environmental departments (n = 5) at communal (n = 8) up to federal state level (n = 4). Experts were asked for their insight on barriers for OHL as well as for cross-sector collaboration. They were selected for a wide range in socioeconomic factors and administrative levels. The interviews were recorded between 10/2018-04/2019. After transcription the anonymized interviews underwent qualitative content analysis.

Results:

In twelve interviews 10.4 h of audio were recorded. Content analysis revealed 13 barriers for OHL. Several of those had been described for hospitals before while others, like low responsiveness to the needs of the public, were unknown so far. Preliminary results also indicated several barriers for cross-sectoral cooperation as well as recommendations to overcome said barriers.

Conclusions:

Interviews with public health and environmental administrative organizations turned up 13 barriers that keep them from raising their OHL. Implementing preliminary recommendations could result in better cooperation, in higher OHL, higher environmental health and therefore contribute to public health in the general population.

Key messages:

- Interviews with experts from public health and environmental administrative organizations in Germany turned up barriers that keep them from raising both their OHL and cross-sectoral cooperation.
- Implementing preliminary recommendations could result in higher OHL of public health departments and higher environmental health of the general public and thus contribute greatly to public health.

Associations of environmental variables with different types of stroke

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Background:

Air temperature (T) and atmospheric pressure (AP) are among the most closely studied weather variables; increases, decreases, and fluctuations in both have been significantly linked to numerous stroke subtypes. We decided to detect the association between daily numbers of ischaemic stroke (IS) and haemorrhagic stroke (HS) and daily North Atlantic Oscillation (NAO) and Arctic Oscillation (AO) indices and monthly indices of Quasi-Biennal Oscillation (QBO).

Methods:

The study was conducted in Kaunas city from 2000 to 2010. Kaunas stroke register presented daily numbers of IS, subarachnoid haemorrhages (SAH), and intracerebral haemorrhages (ICH). We evaluated the association between these types of stroke and NAO, AO, and QBO indices (NAOI, AOI, and QBOI) by applying Poisson regression, adjusting for month and other weather variables.

Results:

During the study period, we analysed 3,992 cases (2,205 men and 1,787 women) with stroke. IS composed 3,199 (80.1%), ICH 533 (13.4%), and SAH - 260 (6.5%). A change in mean daily atmospheric pressure (AP) of >3.9 hPa and QBOI <-27 were associated with the risk of SAH (RRs with 95% CI were, respectively, 1.54 (1.18-2.03), and 1.68 (1.06-2.66)). The risk of HS was associated with daily increases in AP and QBOI <8.37 ($p<0.05$). The risk of IS was negatively associated with AOI (RR = 0.97 (0.94-0.99). During November-March, NAOI >0 was associated with HS (RR = 1.29 (1.03-1.62)), and a negative association between NAOI and IS (RR = 0.91 (0.84-0.98)) was found.

Conclusions:

The results of our study provided new evidence that the NAO, AO, and QBO pattern may affect the risk of stroke. The impact of these teleconnection indices is not identical for different types of stroke.

Key messages:

- This abstract is part of publication, which will be published later on.
- In some cases, environmental impact is not essential, but quite often determines the course of various diseases, especially of the circulatory system.

Socioeconomic inequalities in cognitive performance among early ageing people: The Constances cohort

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Background:

In spite of the recent awareness of environmental characteristic's impact on brain aging, links between contextual socioeconomic status and cognitive performance (CP) remains unclear. The objective was to investigate the influence of individual and contextual deprivation on cognitive performance in order to better characterize vulnerable population.

Methods:

We performed cross-sectional analyses on 44,762 participants (45-70 y) of the French Constances cohort. Cognitive performance was assessed using a global cognitive score calculated with 6 cognitive tests evaluating global cognitive function, episodic verbal memory, language abilities, and executive functions. Poor performance was defined as a score below or equal to the 25th percentile of the distribution. We approached the deprivation by two validated multidimensional index: at individual level with the EPICES score (deprived if <30.17) and contextual level with the FDep09 score divided in quintile (Q5 being the most deprived). Associations were estimated with multilevel logistic regressions.

Results:

At the individual level, participants more deprived had poorer CP independently to sex, age, education and health status (OR 1.58 [1.48; 1.69]). At the contextual level, the more people lived in deprived environment, the poorer their CP ($p<.0001$), even after adjustment on individual deprivation and other individual characteristics (Q5 vs Q1: OR 1.28 [1.15; 1.41]).

Conclusions:

In this large cohort of early-ageing people, area-based disparities in cognitive impairment were highlighted. A better understanding of the influence of living environment deprivation level on cognitive aging could help to define new strategies in prevention by targeting at-risk populations in interventions studies in order to reduce social health inequalities.

Key messages:

- Our study evidenced a strong socio-economic gradient of cognitive performance identifiable on both individual and contextual level, in a large sample of middle-aged volunteers.
- Independently to individual deprivation and other individual characteristics, living in a deprived environment may be detrimental to the brain health.

Social cohesion as a mechanism behind neighbourhood effects on mental or physical health

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Background:

The neighbourhood where an individual resides have become a relevant element in the study of health inequalities. While there is substantial evidence that environmental factors affect health, far less evidence of the hypothesised role of social mechanisms in the causal chain between neighbourhood characteristics and health is available.

Methods:

Using data from the longitudinal German SOEP panel, we built measures of perceived neighbourhood characteristics and a measure of social cohesion for participant living in urban areas. Participants were included in a longitudinal cohort of 4 year observation time starting in 2004. Using linear regression models, we tested the role of social cohesion as a mediator between the neighbourhood characteristics at baseline and a health outcome (mental and physical component of the SF-12) at the end of follow-up adjusted for socio-economic variables.

Results:

For the 4 year follow-up 10 665 participants were included. There was no evidence of a mediation effect of our measure of social cohesion between geographical or institutional characteristics and physical health. The effect of social cohesion on mental health was 2.03 ([1.44, 2.59]) and on physical health 1.78 ([1.27, 2.29]). Social cohesion mediated associations between biological (17%, 11%) or built (11%, 14%) characteristics and both physical and mental health and association between institutional characteristics and mental health (7%).

Discussion:

We found evidence for a possible role of social cohesion in the pathway between neighbourhood characteristics and health. Only perceived characteristics have been used in this work and the respective role of objective and subjective measures of neighbourhood characteristics should be further investigated. Moreover, validated measures of social cohesion should be developed.

Key messages:

- The perception of social cohesion mediates the effect of specific perceived characteristics of neighbourhood on mental and physical health.
- Interventions seeking to improve social cohesion in neighbourhoods might have positive consequences on the health and wellbeing of inhabitants.

An ego-centred approach for the evaluation of health inequalities in urban areas

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Background:

Neighbourhood possesses attributes, structural, physical and social, for which pathways to health inequalities could be hypothesized. Hence, neighbourhood is a complex mixture of factors which cannot be simply defined by a delineation on a map, making common definitions of neighbourhood (e.g. administrative borders) problematic. We present a new concept for the evaluation of contextual health inequalities in an urban setting.

Methods:

An ego-centred approach to neighbourhood effects on health allows to establish to what degree the health outcomes of a person are on average correlated to the health outcomes of his/her neighbours. This approach does not necessitate the definition of what a neighbourhood is, or of its boundaries. Using data from the BaBi birth cohort following up 958 mother-child pairs in Bielefeld/Germany we illustrate how the method provides information about the spatial structure of a possible association between unmeasured neighbourhood factors and birthweight. Spatially correlated birthweight indicates a neighbourhood effect on maternal health.

Results:

A parametric model of the correlation structure gives two indicators: a distance after which health outcomes are no longer correlated (practical range), and the strength of correlation (RSV). We modelled birthweight directly and residuals after controlling for (spatially correlated) covariates. After adjusting for the mother's demographics and neighbourhood characteristics, birthweights remained spatially correlated with RSV of 11% and a practical range of 128 m.

Conclusions:

Modelling the spatial correlation of a health outcome provides a measure of the degree of health correlation, thus offering new evidence on the production of health inequalities while incorporating current modelling approaches. Moreover, it measures heterogeneity in a city. This could be used as an indicator for policy makers or town planners to identify areas in need of socioeconomic investment.

Key messages:

- Modelling the spatial correlation of health outcomes is an approach which enable to assess unmeasured neighbourhood effects.
- The health correlation neighbourhood approach helps to investigate the production of health inequalities and to identify urban areas in need of socioeconomic investment.

High resolution data to estimate effects of pollution and temperatures in Italy: The BEEP project

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Introduction:

The BEEP (Big data in Environmental and occupational Epidemiology) project aims to estimate the health effects of several environmental risk factors on the Italian population at municipal level. Specific focus is being devoted to the risk of hospitalizations and mortality at the national level and within the major metropolitan areas and the risk of occupational injuries.

Results:

Particulate matter concentrations and mean air temperatures (1x1km) were estimated using satellite data, land use data and observed data from monitoring networks for the Italian domain for 5 yrs. The short-term effects of PM and air temperature on morbidity and mortality only in Sicily, Lazio, Puglia, Emilia Romagna and Piedmont, were assessed. The preliminary results show: an increased risk of natural mortality, cardiovascular and respiratory hospitalizations in subjects exposed to PM, as well as higher effects in the older age on respiratory admissions in males. Associations were found also in the municipalities of medium and low level of urbanization; a non-linear relationship was found with increased risk of hospitalizations and mortality for high and low temperatures. Effects of heat were observed on respiratory hospital admissions, and effects of cold temperature were found on both cardiovascular and respiratory admissions. Larger effects of heat and cold were estimated in the elderly and in municipalities at a higher urbanization; a larger risk of occupational accidents in the construction industry for hot temperatures and in the transport sector for cold temperatures were evidenced.

Conclusions:

Results of the BEEP project provide innovative findings on the health risks of environmental exposures in both urban and rural settings and provide decision makers with important information for the definition of prevention measures.

Acknowledgement: The BEEP project is supported by INAIL and is described in the website: www.progettobeep.it.

Key messages:

- Using Big Data (environmental and Health) is possible estimate the effect of pollution and temperature on mortality and morbidity among the residents in cities or rural areas.
- Pollutant increase the risk on natural mortality and cardiovascular and respiratory hospitalizations.

Cancer incidence in the vicinity of a waste incineration plant in the Nice area between 2005-2014

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Introduction:

Few studies on cancer incidence have been conducted since the EU 2000/76/EC Waste incineration directive.

Objective:

To measure cancer incidence among the population exposed to atmospheric emissions from the Ariane waste incineration plant near Nice, in the Alpes-Maritimes (AM), compared to the unexposed AM population.

Methods:

All primary invasive cancers and malignant haematological conditions diagnosed among AM residents from 01/01/2005 to 31/12/2014 recorded by the CRISAPPACA Cancer Observatory, public and private hospitals and the ONCOPACA-Corsica Network were included. The exposed area, based on an average dioxin deposition model, was that with a concentration $\geq$4.25ng/m^2/year. Each case was geolocated and assigned to a predefined geographic unit (IRIS): 36 units in the exposed area, 462 in the unexposed area. The adjusted incidence rate, the standardized incidence ratio (SIR) and the Comparative Morbidity Figure (CMF) were calculated for two periods: 2005-2009/2010-2014.

Results:

We recorded 80,865 new cancers in the AM population (1,083,974 residents; 87,462 exposed). For the 2005-2009 period, among exposed women, excess SIR were recorded of acute myeloid leukaemia (SIR = 1.81 [1.03-2.93]), myelodysplastic syndromes (SIR = 2.58 [1.70-3.76]) and myeloma (SIR = 1.64 [1.09-2.37]); in exposed men, of soft tissue sarcomas (SIR = 1.65 [1.05-2, 48]), myeloma (SIR = 2.04 [1.39-2.90]) and lung cancer (SIR = 1.19 [1.03-1.36]). For the 2010-2014 period, there was no excess SIR among women, while among men an excess SIR of myeloma (SIR = 1.76 [1.21-2.47]) and lung cancer (SIR = 1.24 [1.08-1.41]) was observed.

Conclusions:

The higher incidence of myeloma and lung cancer in both periods can be explained by their long latency and by other risk factors. The EU Directive appears to have resulted in limiting atmospheric emissions from the incinerator.

Study funded by the Nice Côte d'Azur Metropolis and with the support of the South-PACA Regional Health Agency.

Key messages:

- Few studies on cancer incidence have been conducted since the EU 2000/76/EC Waste incineration directive.
- The EU Directive appears to have resulted in limiting atmospheric emissions from the incinerator.

Implementation of a nationwide Waterborne disease outbreak surveillance system in France

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Issue/Problem:

Waterborne disease outbreaks (WBDOs) remain a public health issue in developed countries, but to date the surveillance of WBDOs in France, mainly based on the voluntary reporting of clusters of acute gastrointestinal infections (AGIs) by general practitioners to health authorities, is characterized by low sensitivity. In this context an integrated and automatized approach to detect WBDO relying on the identification of clusters of medicalized AGI cases sharing a same drinking water networks (DWN) was developed, evaluated in a simulation study and tested in a pilot study by the French National Public Health Agency.

Description of the problem:

Two national big databases support the detection process of potential WBDO: health insurance database for AGI, ministry of health database for drinking water system information. Each detected outbreak has to be investigated regarding environmental criteria during the days before the onset of the outbreak: results on bacterial water monitoring, weather (e.g. heavy rain), technical incidents in the drinking water system (e.g. chlorination breakdown, alarm malfunction). To evaluate the strength of association with drinking water, four levels are proposed based on epidemiological and environmental criteria (strong, probable, possible and undetermined).

Results:

The WBDO surveillance system has been implemented in all french departments since start of 2019 and support by the ministry of health. A web-application, named ''EpiGEH'', was also developed to support the surveillance system. A retrospective study between 2010 and 2017 has detected almost 300 to 550 potential WBDO per year while voluntary reporting identified 2 to 3 WBDO each year during the same period.

Lessons:

Such a specific surveillance system should help health authorities to formulate recommendations regarding the management of drinking water systems and propose appropriate preventive measures, in accordance with the water safety plans.

Key messages:

- The WBDO surveillance system based from health insurance databases constitutes a daily surveillance system of drinking water quality.
- The WBDO surveillance system should drastically improve the detection sensitivity by a factor 100 to 200 compared to voluntary reporting.

Arsenic metabolism and urothelial cancer risk: a systematic review and meta-analysis

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Background:

Arsenic is a toxic metalloid element frequently found in the environment. Chronic arsenic exposure is a critical public health issue in many countries since the identification of arsenic and its compounds as human carcinogens by the World Health Organization. After absorption, inorganic arsenic (iAs) is mainly methylated into monomethylated and dimethylated compounds (MMA, DMA), which are then excreted through the kidney together with unmethylated iAs. Whether the methylation process is to detoxify or potentiate arsenic toxicity, however, remains an ongoing debate. The purpose of this systematic review was to conduct a comprehensive meta-analysis to estimate the association between arsenic exposure and urothelial cancer.

Methods:

10 observational studies met the inclusion criteria and were included in the systematic review. IAs%, MMA% and DMA% were extracted from each paper. Weighted Mean Differences with 95% confidence intervals were defined according to Cases minus Controls. Pooled risk estimates from individual studies were assessed using random effects models. Meta-regression analysis was performed to estimate the extent of urothelial cancer risk as a function of iAs%, MMA% and DMA%.

Results:

Results showed as patients with urothelial cancer presented higher level of urinary iAs% (WMD 2.70, 95%CI 0.64-4.76), MMA% (WMD 2.81, 95%CI 1.43-4.20) and DMA% (WMD-3.44, 95%CI-6.57–0.30).

Conclusions:

These findings suggest that higher level of iAs% and MMA% and lower level of DMA% were associated with an increased risk of urothelial cancer. Additional population based studies are needed to understand the role of arsenic in cancer development. Understanding the meaning of arsenic metabolism could improve the risk assessment of arsenic toxicity and provide a potential tool for disease prediction and prevention.

Key messages:

- Higher level of iAs%, MMA% and DMA% were associated with an increased risk of urothelial cancer.
- Understanding the meaning of arsenic metabolism could improve the risk assessment of arsenic toxicity.

Assessing the use and understanding of the Portuguese Heat–Health Warning System (ÍCARO)

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Background:

Heatwaves can lead to increased mortality. Portugal has a Heat-Health Warning System (HHWS) in place (ÍCARO system). Researchers at the Instituto Ricardo Jorge send a daily report with heat-related mortality forecasts to key stakeholders (e.g. Heat-Health Action Plans (HHAP) staff). HHAP practitioners issue warnings and implement measures to prevent heatwaves-related mortality. ICARO is amongst the recommended data sources to assess risk and issue warnings but its use and understanding is unknown. Therefore, we aimed to assess ÍCARO's use and understanding by key HHAP practitioners.

Methods:

We conducted semi-structured interviews with national and regional HHAP practitioners. Interviews were recorded, transcribed, and analysed using thematic content analysis. Intercoder reliability was applied to a sample of segments from 5 of 6 interviews.

Results:

We conducted 6 interviews with 9 professionals (mean time 52 minutes). We identified 4 categories: Report's content and presentation, Report's reception and communication, ÍCARO and risk assessment, Other issues. Practitioners use ÍCARO and perceived it as very relevant tool. However, they mentioned several questions on its interpretation. Practitioners also felt their questions were not fully answered, given researchers' use of statistical terms. Finally, practitioners referred the need to assess risk at the local level, information not currently provided. We also identified the need for improved communication and report's clarity.

Conclusions:

Our study stresses the need for an integrated collaboration between experts within HHWS and HHAP. Despite ICARO's understanding being challenging, practitioners consider it a relevant tool. Researchers should use less statistical language and clarify ÍCARO interpretation. Practitioners' needs should be considered when developing or revising tools. We are currently implementing some of these recommendations in an attempt to close the gap between researchers and practitioners.

Key messages:

- Portuguese Heat–Health Action Plans practitioners use heat-related mortality forecasts (ICARO) and perceived it as very relevant instrument. However there find ICARO's interpretation challenging.
- Portuguese Heat/Health Action Plans Practitioners' needs should be considered when revising or developing tools, and notes should be added to clarify statistical/technical concepts.

Environmental health risks perceptions: results from cross-sectional surveys in Southeastern France

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Background:

In accordance with commitments made as part as the European conferences on environment and health in the 90s, France has adopted national environmental health plans since 2004. These plans include regional offshoots to take local specificities into account. To guide stakeholders in defining this plan in Southeastern France, studies were carried out to document general population environmental health risks perceptions and practices.

Methods:

Data come from the Southeastern Baromètre santé environnement, random cross-sectional telephone surveys carried out in 2007 and 2017 among the population aged 18-75 years (n = 1415 and 1960 respectively). They focused on people perceptions' about environmental health risks (e.g., air pollution) and actions to reduce them, trust in sources of information, and their practices. We performed descriptive analyses of the 2017 data, and logistic regression models adjusted for sociodemographic variables to test time evolutions.

Results:

In 2017, the main environmental health risks perceived were pesticides, carbon monoxide, and air pollution (over 90% of the participants thought they carry high health risks). As in 2007, over 90 % thought the air quality had been worsening. The most efficient ways to reduce air pollution were the improvement of public transportation, of bike paths and the development of car sharing. Between 2007 and 2017, self-reported use of soft mobility and/or car sharing increased from 54% to 66%; and consumption of organic food increased from 40% to 69%. Participants perceived physicians as the most trustful source of information about environmental health.

Conclusions:

Habitants from Southeastern France are highly concerned by environmental health risks, especially pesticides and air pollution. They call stakeholders to take actions to reduce these risks, but appear to have changed some of their own practices too. These results helped stakeholders to define priorities of the current regional environmental health plan.

Key messages:

- The general population was highly concerned by environmental health risks (especially pesticides and air pollution), and has become aware of the necessity of changing its own practices.
- Such results about the regional population main concerns have been used to define regional priorities for actions.

A mobile device to reduce airborne particulate and prevent surgical site infections

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Background:

Surgical Site Infections (SSI) are the second main cause of Hospital Acquired Infections (HAI) in Europe and in the United States (US). In US and Europe hospitals the overall annual medical costs of HAI is about $40 billion and the SSI represent a relevant part of this spending. It is known that air particulate is a carrier of pathogen bacteria. The aim of this study is to verify if a mobile unit for air particle filtering can improve the environmental airborne conditions of an operating room (OR).

Methods:

We carried out a cross sectional study in March 2018 in an Italian University Hospital. A novel mobile device to purify air was tested during surgical procedures. It is provided with: an air decontamination-recirculation system unit; a patented crystalline ultraviolet C reactor; a highly efficient particulate air filtering. The environmental contamination has been monitored in the following phases: I) device off and OR at rest; II) device off and OR in operational; III) device on and OR in operational; IV) device off and OR in operational. We used a particle counter to measure airborne particles of different sizes: 0.3; 0.5; 1.0; 3.0; 5.0; 10 μm. Air samples were withdrawn in four spots of the OR periphery. Wilcoxon rank test was used for the statistical analysis setting the significance level to 95% ($p < 0.05$).

Results:

From phase II (device off) to phase III (device on), there was a reduction of any particulate matter size, ranging from 50% to 73% ($p < 0.05$). When the device has been turned off again (phase IV), particle dimensions of 0.3, 0.5, 1.0 and 3.0 μm were lower in the percentage range of 51-62% ($p < 0,05$). Particle dimensions of 5 and 10 μm were also lower in the range of 56% and 76%, respectively.

Conclusions:

During mobile device operation, the amount of particulate matter remains significantly lower, reducing the probability of SSI.

Key messages:

- Air particulate in surgical room may play a role in preventing Surgical Site Infections.
- The mobile device was able to significantly improve air quality during real operation conditions.

Association between heat waves and number of deaths for old-age in slovenia, from 2013 to 2017

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Background:

Heat waves are associated with incresed mortalitiy, especially in old-age population.

Methods:

We estimated relative risks for number of deaths, for the observed diagnoses, sex, and area, as well as 95% confidence intervals and excess deaths associated with heat waves occurring in the years from 2013 to 2017, for population 75+ years old.

Results:

Statistically significant were: in 2014: all causes of deaths (RR = 1.27, CI 1.12-1.44); male, all causes of deaths (RR = 1.27, CI 1.04-1.56); female, all causes of deaths (RR = 1.26, CI 1.08-1.48); all, circulatory system diseases (RR = 1.19, CI 1.01-1.43); female, circulatory system diseases (RR = 1.23, CI 1.01-1.51); rural area (RR = 1.28, CI 1.09-1.51); urban area (RR = 1.35, CI 1.11-1.64); and in 2015: all causes of deaths (RR = 1.28, CI 1.15-1.41); male, all causes of deaths (RR = 1.27, CI 1.08-1.5); female, all causes of deaths (RR = 1.27, CI 1.12-1.45); all, circulatory system diseases (RR = 1.27, CI 1.1-1.48); male, circulatory system diseases (RR = 1.38, CI 1.06-1.79); female, circulatory system diseases (RR = 1.23, CI 1.03-1.47); rural area (RR = 1.31, CI 1.16-1.47). No significant association in 2013, 2016 and 2017 appeared.

Conclusions:

Despite increasing heat load in observed years, we did not notice a statistically significant association between heat waves and the number of deaths in the last observed years 2016 and 2017. The results indirectly show that we are on good way with our public health efforts concerning awareness of Slovenian people about the dangers heat waves bring.

Key messages:

- Heat waves will become more intense, will last longer and will appear more frequent. We must take care after old age population.
- Chronic noncommucating diseaes increase and life expectancy also increases, so the burden of deaths during heat waves is expected to increase too.

Towards a better integration of health in urban development project: from theory to action

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Background:

Despite a well knowledge about links between urban planning and health, practices' analyze highlights the difficulty to upgrade health into urban planning decisions. To overcome this issue, the EHESP has initiated a specific research dedicated to the development of tools for a better integration of health & wellbeing at different decision-making-level (urban planning & urban development project). The objective of this presentation is to focus on one dedicated research, Isadora project, and to share how the project was carried out to enable the production of an operational tool dedicated to urban planners to better integrate health issues into their practices.

Methods:

The scientific management team mixed various skills from public health, environment and urban planning sectors which makes easier the implementation of two key-principles of research: (i) to adopt a systemic approach to health determinants, (ii) to address urban settings through an integrated approach to public health, environment and sustainable development issues. The implementation of this interdisciplinary and intersectorial project is based on a close collaboration with a national working group composed of various professionals and academics (urban planning, environment, and health). The Isadora project deliverables results from an iterative process between all the stakeholders involved in the project.

Results and conclusions:

First, we will present how we facilitated the working group throughout the deliverables development process and how we overcame the challenges of implementing intersectorality. Then, we will present the operational tool structured around of 15 key sheets with health focus to help professionals to integrate health at each step of an urban development project.

Key messages:

- ISadOrA project aspires to promote an evolution of urban planner's practices in order to achieve a healthy urban development project.
- This ambition requires the translation of concepts into actions.

Evaluating implementation of an Heat-health action plan during 2018 heatwave in Amadora, Portugal

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Issue:

Heatwave-health effects are preventable. Heat-health action plans (HHAPs) include preventive measures aimed at protecting population. In Portugal, HHAPs exist since 2004 and have been operationalized at local level. Heatwaves occur infrequently, thus experience with HHAPs is relevant to countries implementing their own HHAPs.

Description:

In the summer of 2018, Amadora (Lisbon, Portugal) issued a warning from the 2nd-6th August (highest level:4th-6th). Before/during the warning we implemented: 1.climatized shelter opened available upon request;2.text messages with recommendations and information on the walk-in clinic services available;3.information to nursing homes regarding available services (walk-in services/shelter);4.contact with individuals receiving home support and identified as vulnerable. Nationwide media publicity of individual protection measures was also ongoing. We aimed at evaluating these HHAP measures. We compared demand of walk-in clinic (primary care) and emergency department with existing capacity, updated during the heatwave. Mortality was analysed using an observed-expected ratio (O/E) of week 32 (following the heatwave) and 95% confidence interval (95%CI) under a Poisson distribution. Expected deaths were the average deaths in week 32 of the previous 4 years (2014-17).

Results:

In the primary care walk-in clinic the demand was ½ of capacity; hospital emergency services demand did not increase. We had no requests for the shelter unit. Regarding mortality, O/E was 1.57 (95%CI:1.12-2.14). These results are preliminary; we are producing more detailed analyses of mortality data.

Lessons:

We have no counterfactual to assess the effect of our HHAP but our results indicate the possibility to reduce heatwaves-mortality further and thus the need for additional measures. We did not observed the expected surge in service demand; the adequacy of supply-based measures is currently under debate. More detailed mortality analysis will provide further insights.

Key messages:

- We implemented several measures during a heatwave in Amadora, Portugal with no increased demand in available health services in the area.
- We detected an increased mortality following the heatwave, suggesting the need to implement further measures.

Neighborhood environment and physical activity among rural Japanese older adults

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Background:

Physical inactivity is one of the global health concerns. Rural populations in general tend to be more physically inactive and have higher risk for chronic conditions. Although numerous studies have assessed the association between neighborhood environment and physical activity to implement population level intervention, most are limited to urban adults. This study investigated potential neighborhood environment associated with physical activity for rural older adults in Japan.

Methods:

The study subjects were from Shimane where is a rural-mountainous region in Japan. Those agreed to participate in the Shimane CoHRE study as of baseline (2010) and followed-up after 5 years were included in the analysis (mean age = 71, n = 717). Subjects were asked if they engage in 30 minutes exercise more than twice a week at baseline and follow-up surveys. As a primary exposure, we computed mean land slope within 500 m street network buffer from residential point of each subject by geographic information system. Multiple logistic regression was conducted to estimate the odds of exercise engagement after 5 years by slope categorized in tertile, adjusting for age, BMI, and exercise habit at baseline.

Results:

Significantly higher odds of exercise engagement was observed among those living in the hilly area compared to moderately hilly area after 5 years adjusting for baseline age, BMI, and exercise habit, (Odds ratio (OR): 1.71, 95% Confidence Interval (95%CI): 1.119, 2.616). There was no significant difference of odds between those in flat area and moderately hilly area (OR: 1.137, 95%CI: 0.738, 1.751).

Conclusions:

This finding suggests that people living in hilly neighborhoods are more likely to maintain or start engaging in exercise after 5 years. Considering other potential environmental factors and farming culture within rural areas, future studies should capture various forms of environmental components and physical activity to dissect the mechanism.

Key messages:

- There are limited studies focus on rural older adults.
- Unique geographic feature in rural areas, i.e. hilly neighborhood might be associated with physical activity.

Hillwalking and walk leading motivations, perceived benefits and the role of natural environment

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Background:

Promoting the link between human and ecosystem health is crucial for building resilient communities. Hillwalking provides health benefits arising from physical activity and exposure to nature. Furthermore, it is likely to influence environmental knowledge and pro-environmental behaviour through connectedness to nature. This project aimed to explore 1) hillwalking and walk leading motivations and perceived benefits, and 2) the role of the environment and nature connectedness among walk leaders and walking holiday guests.

Methods:

The first study was completed with seventeen volunteer walk leaders and used a mixed methods design: hillwalking interviews, physical activity measurements, location data and the Nature-relatedness scale. The second study involved five group interviews with the total of twenty-five guests on three different walking holidays. The qualitative data from both studies were analysed using a combined thematic and grounded theory approach and the results were merged with the quantitative data to explore the impacts of environmental factors.

Results:

Primary motivations for hillwalking included pleasure, escape from everyday life pressures, to re-charge, being in nature, social inclusion and health. Emerging overarching themes such as balance and adaptation were reported as essential values for walking and were linked to nutritional, physical activity related and environmental aspects of health awareness. The perceived benefits positively impacted on engagement. Connectedness to nature was linked to environmental knowledge and attitudes which manifested in pro-environmental walking behaviour.

Conclusions:

The pleasure arising from several aspects of hillwalking or walk leading was the drive for regular engagement, therefore a primary intrinsic motivation. The results imply that attending group walking holidays has the scope to increase environmental awareness and engagement in outdoor physical activity and could be considered as a promotion tool.

Key messages:

- The findings have the scope to inform future walking promotion programs and encourage long-term engagement by shifting the focus of promotion messages to intrinsic motivational factors.
- The results support that hillwalking can be used as a tool for combined health and environmental awareness promotion.

Environmental noise levels and noise annoyance in Novi Sad, 2012-2016

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Objective:

Increased noise level represents a significant public health problem in urban environments. The aim of this paper is to examine the annoyance of the population by road traffic noise in the City of Novi Sad.

Methods:

The results of 161 24-hour noise measurements in Novi Sad were analyzed. Measurements were done by Public Health Institute of Vojvodina, according to accredited and standardized national methodology during 2012 - 2016.

Results:

Total noise indicator (Lden) / night noise indicator (Lnight) ranged from 61,1 dB / 50,7 dB in residential, up to 66,3 dB / 58,1 dB in recreation / hospital areas, 68,0 dB / 60,3 dB in city traffic areas and 70,2 dB / 62,7 dB in business and residential areas. Taking into account the results and using methodology prescribed by national regulations, the percentage of highly annoyed population (% HA) was found to be in the range 11-25% during the day, and 6-13% during the night. Using ISO 1996-1:2016, prevalence of a population highly annoyed (PHA) was established to be in the range 9,2-33,9% in residential; 18,4-45,7% in recreation / hospital areas 22,9-50,6 in city traffic; 27,7-55,4% in business and residential areas.

Conclusions:

The results confirm that urban noise seriously disturbs people. It was established that about a half of the population was highly annoyed which poses a serious challenge for public health. The results have social, health and economic importance for the population. Activities to reduce the noise level could also stimulate economic, health, social and community programs for sustainable development aiming to preserve and improve human health.

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Key messages:

- Continous noise monitoring is important for understanding the impact of noise on human health.
- About a half of the population was highly annoyed by noise, which poses a big challenge for public health in urban areas.

Bridging worlds: community led visual methods amidst climate change related disasters in Australia

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Background:

In February 2009 Victorian rural communities were hit by the worst bushfires in Australian history. Immediately we evaluated community groups preparing residents for bushfires. Ten years on, we are one of the few teams to evaluate medium to long term community recovery using multiple methods. As climate change becomes more visible, the frequency and intensity of disasters will increase so communities, governments and service providers need more evidence based strategies and policies. We explore how participant led visual methods provide new knowledge.

Methods:

In study 1 participants in 3 of 7 focus groups in peoples' homes spontaneously brought photos for us to examine before the discussions. In another participants spoke of the importance of photos they took at the time. We returned to the field to interview people in their homes about the meaning and role of photos.

Results:

Participants wanted to inform us-as outsiders-of the awe and enormity of the fires. They created a visual record to communicate with key interest groups and ward off complacity as memories receded. Photos helped them construct timelines and meanings of the intense fires. Crucially, they recorded recovery and rebuilding in both the built and natural environments. Over the next ten years we chronicled stories from community led visual methods of communication, recovery and empowerment. We incorporated into qualitative methods participant led tours of their environments, with visual methods. Visual data collected by communities focused more strongly on the natural environment than researcher led verbal methods.

Conclusions:

Visual sociology changes as technology provides participants in research with increased access to, and control over, visual methods. These changes can rebalance power relations between qualitative researchers and participants and bridge visual and verbal methods; crafting striking stories to influence those Australian policies unresponsive to climate change.

Key messages:

- Technological change enables participants in qualitative research to initiate visual methods to build bridges between them and researchers.
- Community led visual methods provide new types of data useful for theory and knowledge translation.

Facing climate change challenges: the Italian Public Health Residents response

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Background:

Climate change (CC) is one of the most important global issues, and exerts a strong impact on public health (PH). Correlation between CC and PH is a matter of concern in the whole scientific community and requires an interdisciplinary approach. Nevertheless, the need to take action on CC sometimes contrasts with national and local policies, involved professionals' training and citizens' education. In order to face these challenges, the Italian network of public health residents ''Consulta Specializzandi'' of the Italian Society of Hygiene, Preventive Medicine and Public Health (SItI) decided to create a specific working group.

Objectives:

Main objectives are education of PH residents and practitioners on CC, argument disclosure among the SItI and creation of interdisciplinary networks to promote and extend group activities. Secondary objective is development of a study to identify the gap between scientific evidence, recommendations and guidelines, and the European, national and local policies, with the aim of promoting bottom-up researches and good practices in CC management.

Results:

The group was created in January 2019; activities started in March. Firstly we defined priorities and work mode. Then we analyzed scientific evidence and promoted self-training on the link between environment and CC and on the impact of CC on individual and public health. Finally, through attendance at workshops and scientific events, we began to train other PH residents and practitioners and started to create networks with other scientific societies, research centers and foreign academies, in order to promote international research, advocacy and disclosure between different institutions regarding the relationship between CC and PH.

Conclusions:

The group has already partially achieved its main objectives, especially increasing awareness and training in CC and related issues. Further activities will permit to strength interdisciplinary networks and to move to secondary objectives.

Key messages:

- CC severely impacts society. Yet there is no widespread feeling of urgency to act towards its causes and consequences. A change in mindset is mandatory, from individual citizens to decision makers.
- PH residents and practitioners must be the main actors in training and education, advocacy, disclosure and network creation in CC research and management.

Healthier breath for all and everywhere – Urban air quality monitoring experience

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Issue/problem:

Increasing attention is being paid to air pollution as one of the greatest threats to public and urban health. The WHO's Urban Health Initiative points out the importance of collecting data and mapping the present state of air quality in urban areas. For citizens, such engagement is enabled by the appearance of personal air quality measurement devices that use crowd-sourcing to make measurement results publicly accessible in real time.

Description of the problem:

As a way of contributing to air pollution monitoring in their town, three PhD Public health students conducted over 40 measurements between the start of June and end of August 2018 on various locations in the city of Novi Sad, Serbia. Measurements were performed using AirBeam personal air quality monitoring devices and their results presented as μg/m3 of Particulate Matter 2.5 (PM2.5) and automatically uploaded to the internet using the Air-casting app.

Results:

Measurements conducted in public transportation vehicles returned the rather high average value of 40 μg/m3, where coffee shops and restaurants scored an even higher value of 48,67 μg/m3. The lowest average air pollution levels were registered near the Danube river bank (5.67) and in the parks (6), while the sites near crossroads or in the street showed average air pollution of 8.33 μg/m3.

Residential areas where smoking is present during the day reported 2.5 times higher PM2.5 values than those without smokers (33.8 and 12.78 μg/m3).

Lessons:

Bearing in mind that the air quality is considered as a serious health risk in urban areas, results of this pilot investigation suggest potential health risk for citizens living in urban areas. The negative effects of combustion and smoking on air quality are strongly highlighted, as well as the positive impact of green areas and parks near residential areas.

Key messages:

- Air pollution exposure as a serious health risk in urban areas.
- Crowdsourcing as a way of air quality monitoring has great potential for contributing to public health.

Occupational exposure assessment to per and trichloroethylene in dry cleaning in Sfax city (Tunisia)

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The use of chlorinated solvents in dry cleaning poses risks to human health. The current study is the first in Tunisia and Sfax city that aims to assess the occupational exposure and health risks of perchloroethylene (PCE) and trichloroethylene (TCE) in the dry cleaning industry. TCE was suspected to be used as it is not explicitly banned by law.

We identified dry cleaning facilities by door-to-door canvassing within a 5 Km radius from the city center of Sfax. We found 47 facilities, but only 33 accepted to join our study. Then, we randomly selected 16 facilities where the exposure assessment to these solvents was conducted by indoor air measurements. The exposure levels were compared to occupational exposure limit values (OELV) and toxicological reference values. Then, cancer risks were evaluated.

TCE was detected in all workplaces and their levels are close to the OELV (95% CI of the mean value [40.4-46 mg/m3]). The mean value of PCE concentrations is lower than the fifth of the OELV, but they are quite variable (95% CI of the mean value [5.1-43.4 mg/m3]). The overall results showed that inhalation exposure levels may induce many adverse effects that are probably threatening the occupationally exposed population and even the general one, because of the location of all facilities in residential settings. Among threshold effects, we noted high risks of neurological, renal, developmental and immune effects. As for carcinogenic effects, greatly high cancer risks were noticed if the lifetime exposure would have these average levels; 17 additional cases of kidney, hematologic or liver cancers are expected to occur in populations of 100.

This study is significant for better understanding of the dry cleaning industrial sector in Tunisia and for the progress of future risk assessment studies. Indeed, it responded to many interrogations and suspicions about the qualitative and quantitative exposure conditions and thus the health status of dry cleaning workers in Sfax.

Key messages:

- Our study is the first health risk assessment study of the exposure to chlorinated solvents in dry cleaning in Sfax city. It revealed high levels of trichloroethylene that is a carcinogen to humans.
- The high exposure levels to per and tri-chloroethylene, in dry cleaning in Sfax city, may induce adverse health effects to workers and even the general population due to residential exposure.

Effect of outdoor air pollution on respiratory deseases in the District of Tunis

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Background:

Asthma and Chronic Obstructive Pulmonary Disease (COPD) are the two most common chronic obstructive pulmonary diseases worldwide. The objective of this study was to analyze the relation between the daily levels of air pollution indicators and the number of emergency department visits (EDV) for asthma and COPD exacerbation in the District of Tunis.

Methods:

We conducted a retrospective ecological study. We collected daily morbidity data from the emergency register of Ariana Mami Hospital from 1 January 2007 to 31 December 2014. We investigated the association between daily EDV for asthma or COPD exacerbation and daily concentrations levels of air pollutants by simple Pearson correlation and by binomial negative regression using generalized linear models (GLM).

Results:

For morbidity data, we recorded 19127 EDV for asthma (10771, 56.3%) and COPD exacerbation (8356, 43.7%) between 2007 and 2014. We observed a rising trend in the number of EDV for COPD since 2007 with winter seasonality. Regarding the profile of air pollution in the study region, we have exceeded the thresholds of all standards for PM10, exceeding the Canadian standard for O3. However, no threshold exceeded for NO2 and SO2. In the univariate analysis, there was a positive correlation between the daily number of EDV for asthma and COPD exacerbation and NO2 ambient concentration (r = 0.121, p < 10-3) and O3 level (r = 0.066, P < 10-^{3}). Multivariate analysis showed a significant positive association between the daily number of EDV for asthma and COPD exacerbation and NO2 daily concentration (Adjusted OR = 1.033, CI = [1.011 - 1.055], P < 10-3) with a delayed effect of 10 days for NO2 and 12 days for O3.

Conclusions:

The exacerbation of asthma and COPD was correlated to the NO2 outdoor air concentration level, with an immediate and other delayed effect of 10 days, also with the 12-day lag from the elevation of O3.

Key messages:

- Ambient air pollution is a major risk factor for respiratory health.
- Reducing NO2 emissions could decrease morbidity and direct health care costs of respiratory diseases.

DH Food, nutrition and diet

Do we practice what we preach? Assessing the food environment in Malta's only state hospital

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Introduction:

Food environments are likely to be key contributors to the development of diabetes and obesity. Hospitals should strive to create a model food environment that facilitates and promotes a healthy eating behaviour among visitors, patients and staff. The study objective was to evaluate foods and beverages available for purchase in vending machines at Malta's only state hospital.

Methods:

An observational study gathered data regarding location, type of food and beverage items available in the vending machines found within the public areas within the only state hospital in Malta. All items on sale were categorized into 'healthy' and 'unhealthy' food and beverage according to pre-defined criteria.

Results:

There were 33 vending machines: sixteen offered beverage options, and the remainder contained food items, which displayed exclusively confectionary items. The beverage machines were identically stocked so that bottled water contributed 17%, diet soft drinks 33% and regular soft drinks 50% of overall beverage choices. Fresh vegetables or fruit were not available for sale (except for 1 beverage machine offering fresh squeezed orange juice) with most items on display classified as 'unhealthy'.

Conclusions:

Hospital food environments should complement health professionals' efforts in promoting healthier lifestyles, however, the majority of foods and beverages available for purchase at Malta's only state hospital through vending machines is unhealthy. Urgent action is required to rectify the current situation.

Key messages:

- Vending machines offered 'unhealthy' choices to patients, relatives and staff.
- Hospital food environment should promote healthier food and beverage options.

Situations in which mothers experience difficulty stimulating healthy EBRB in school-aged children

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Background:

Parental support is an important element in overweight prevention programs for children. The purpose of this study was to examine everyday life situations in which mothers encounter difficulties encouraging healthy energy balance-related behavior in their school-age children.

Methods:

We formed four focus groups containing 6-9 participants each. The participants were mothers of Dutch, Turkish, or Moroccan descent with a child 8-13 years of age. All focus group sessions were recorded, transcribed, and coded. Content was analyzed conventionally using ATLAS.ti 6.

Results:

Twenty-seven difficult everyday life situations were identified in 14 settings. The five most frequently reported situations were a daily struggle regarding eating vegetables, eating breakfast on time before going to school, eating candy and snacks between meals, and spending excessive time watching television and using the computer. A perceived loss of parental control, the inability to establish rules and the failure to consistently enforce those rules were the most commonly cited reasons for why the mothers experience these situations as being difficult.

Conclusions:

We identified five difficult everyday life situations related to healthy energy balance-related behavior. These five difficult situations were used as the input for developing a web-based parenting program designed to prevent children from becoming overweight. We reasoned that if we use these situations and the underlying reasons, many parents would recognize these situations and are willing to learn how to deal with them and complete the e-learning.

Key messages:

- The identified everyday-life-situations in which mothers experience difficulty stimulating healthy EBRBs in their children age 8-13 were used as input for our e-learning program to prevent overweight.
- Mothers who live in low-SES neighborhoods were easily willing to participate in focus groups and discuss EBRB-related topics.

Evaluation of Norovirus contamination in bivalve molluscs harvested from Northern Adriatic Sea, Italy

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Background:

Norovirus (NoV) is the leading cause of acute gastroenteritis in developed countries. Transmission is through direct contact, unsanitary food handling or ingestion of contaminated water or food. Shellfish bioaccumulate NoV and current post-harvest depuration is not effective for its removal.

Materials and

Methods:

A monitoring programme for NoV in bivalve shellfish harvested from Northern Adriatic Sea was initiated in 2016. From January 2016 to March 2019, 418 samples including 257 Manila clams, 73 mussels, 46 striped clams, and 42 oysters, were examined. Mollusc samples were tested for NoV genogroups I (NoV GI) and II (NoV GII) contamination by RealTime RT-PCR according to ISO 15216-2.

Results:

Ninety-three out of 418 tested samples (22.2%) were contaminated by at least one NoV genogroup, the simultaneous presence of the two genogroups was detected in 19/418 of the cases. Positive samples were distributed among the tested species as follow: 29/73 (39.7%) mussels, 51/257 (19.5%) Manila clams, 8/42 (19.0%) oysters, 5/46 (10.9%) striped clam. In 2016 (n = 135), 2017 (n = 122), 2018 (n = 132) and in the first trimester of 2019 (n = 12), prevalence of NoV was 6.7%, 24.6%, 31.8% and 41.4%, respectively. NoV GII was largely predominant being detected, alone or in association with GI, in 98.9% of the contaminated samples. On the other hand, GI prevalence increased from 1.5% (2016) to 12.1% in 2018, maybe reflecting a higher circulation of this genogroup in production environments.

The vast majority of positive samples (91.4%) were detected during the cold season (November to March).

Conclusions:

Overall positive samples have increased over the years (from 6.7% in 2016 to 31.8% in 2018). NoV GII was the most frequently detected genogroup, but NoV GI prevalence significantly raised in 2018. The routine application of quantitative RT-PCR (ISO 15216-1) to determine the viral load in bivalve molluscs would expand knowledge on potential for foodborne transmission.

Key messages:

- Overall positive samples have increased over the years.
- The routine application of quantitative PCR to determine the viral load in bivalve molluscs would expand knowledge on potential for foodborne transmission.

Visual information on labels in commercial baby foods on Bulgarian market

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Background:

Production and sale of commercial baby foods in Bulgaria has grown in the last years. The evidence suggests that inappropriate promotion and advertising of commercial complementary foods can affect unfavourably child nutrition. The World Health Assembly has urged all Member States to ‘‘end inappropriate promotion of foods for infants and young children’’.

Methods:

The survey is part of WHO Regional Office for Europe project: Commercial foods for infants and young children in the WHO European Region. The data was collected in November 2017 in two districts in Sofia, Bulgaria using the mobile questionnaire, developed by WHO. The presence on various types of visual information on the package was recorded for 771 products on the market.

Results:

The results reviled that 94.4% of the labels of baby foods on the market in the capital of Bulgaria - Sofia, use the pictures of ingredients and 52.9% - the cartoon images. The use of images of infants and young children presented in 8.7 % of the products and 6.9% of them marketed as suitable for babies under six months old, in violation of the International Code of Marketing of Breastmilk Substitutes. 0.4 % of baby foods use images of mothers in the labels. The ‘‘other’’ visual information related to various claims including ‘‘quality’’, ‘‘bio’’ (i.e. organic) and various other nutrition and health claims.

Conclusions:

There is inappropriate promotion of commercial complementary foods on Bulgarian market.

Key messages:

- Special measures, including legislative to limit inappropriate practices for the advertising of foods for infants and young children, are needed.
- Raising the parents’ awareness of the criteria for selecting commercial complementary foods is necessary.

A set of pedagogical recommendations for improving the integrated approach to childhood obesity

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Background:

Studies increasingly emphasize the importance of the parents' role in interventions designed to prevent overweight in children. The aim of this study was to develop a unified set of recommendations for healthy parenting practices that can be applied by all professionals who work with children age 4-13 years and can contribute to strengthening the integrated approach to childhood overweight.

Methods:

A modified Delphi procedure was used to reach consensus regarding what these pedagogical recommendations should encompass. The 30 panelists were professionals and researchers who work with children in the domains of health care, overweight, parenting, education, nutrition, and/or sports. The procedure consisted of: i) extracting existing pedagogical recommendations from national guidelines and professional protocols, ii) appraising and prioritizing these recommendations in terms of relevance through two rounds of questionnaires, and iii) meeting to discuss and approve the set of recommendations.

Results:

Consensus was reached for one set of eleven pedagogical theme-based recommendations designed to support and instruct parents how to stimulate healthy energy balance-related behaviors in their child. Each recommendation contained information regarding: i) which behaviors are important, ii) why this is important, and iii) how parents can stimulate this behavior by applying parenting skills. The eleven themes were: modeling, positive parenting, breakfast, varied diet, sugar-sweetened beverages, snacks, physical activity, playing sports, quantity of screen time, screen time during meals, and sleep.

Conclusions:

We developed a set of recommendations for healthy parenting that can be used by various professionals working with children age 4-13 and can contribute to creating an integrated approach to childhood overweight. We also developed a web-based app called ''Recommendations for Healthy Parenting'' as a convenient tool for following these recommendations.

Key messages:

- Our set of recommendations for healthy parenting can be used by various professionals who work with school-aged children, thereby helping strengthen the integrated approach to childhood overweight.
- We developed and released a Dutch web app entitled ''11 Recommendations for Healthy Parenting'' to provide a convenient tool for easily communicating these recommendations to parents.

The impact of joining the Eurozone on nutrition habits in Lithuania

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Background:

Increases in the cost of food often leads to changes in the quantity and type of foods that are purchased. World Health Organization estimates that today's global food prices rose to the highest level. Numerous research results show that the effect of the conversion of national currencies to the euro on the growth of consumer prices in euro area countries was generally mild and one-off.

The aim - to explore the eating habits in 2019 of the Lithuanian population and compare it with results of an eating habits research which was made before the joining euro zone in 2013.

Methods:

The sample under the survey included 1007 of the Lithuania's population. The interviewing under a questionnaire was carried out in March 2019 using the questionnaire developed for this purpose. Statistical analysis was performed using SPSS program package. The results were compared with nutritional habits of the survey done in 2013.

Results:

The results showed that only one-fifth of the Lithuanian adult population thinks about food choices for health benefits - 22 % (in 2013 - 21 %). Food choice is affected by the taste - 37 % (in 2013 - 28%), to a lesser extent - the food price, which represents 24 % (in 2013 - 37%). 67% of the Lithuanian population (in 2013 - 43%) do not always eat at the same time. 59% (in 2013 - 59%) of the adult population eats three times a day. The majority - 98% (in 2013 - 92.9%) of the respondents had a snack between main meals. It is recommended to eat fresh vegetables every day, but this recommendation is shared by 55% (in 2013 - 40%). The milk and milk products are used each day by 51% (37% in 2013) of the population. The majority - 42% (in 2013 - 82%) of adult Lithuanian population most frequently used vegetable oil.

Conclusions:

More people started to choose food by taste, and a decreased number of those who choose by price. There is increased number of people who eat fresh vegetables every day and decreased number of people who use vegetable oil.

Key messages:

- There are differents in nutrition habits among Lithuania population before and after joining Eurozone.
- The study showed the impact of joining the Eurozone on the diet of the population.

Attitudes, norms and behaviors enhancing unhealthy food choices of high school students in Armenia

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Background:

Negative attitudes towards healthy eating behaviors are common among school-aged children. Given the scarcity of studies investigating eating behaviors among adolescents in Armenia, the current study sought to explore eating behaviors among high school students and assess the attitudes, norms and behaviors enhancing unhealthy food choices among them. Theory of Planned Behavior (TPB) was applied as a theoretical framework.

Methods:

A qualitative study with focus group discussions and in-depth interviews was conducted using semi structured interview guides developed based on TPB framework. The study covered high school students aged 15-18 years old, their parents, teachers and school canteen staff, residing in cities and villages of Shirak province, Armenia. Direct content analysis with deductive approach was used for data analysis.

Results:

The most preferred foods by the adolescents were fast foods, sweets, salads and sugar sweetened beverages. Taste was the most powerful attitudinal factor influencing their food choices. Friends and advertisements were the main role models affecting adolescents' eating behaviors. Knowledge on unhealthy food choices and the consequences of unhealthy diet on one's health were adequate among all participants, but unlike rural participants, this factor did not result in healthy eating behavior among urban participants. Lack of time, high cost of food, seasonal changes in food availability, limited food choices in school canteens and low coverage of schools with canteens, especially in the villages, had considerable impact on adolescent's food choices.

Conclusions:

According to the study results, most of the TPB constructs played role in shaping unhealthy eating behaviors among adolescents. Based on the findings, recommendations were made to conduct social advertising of healthy food choices and healthy eating behaviors among adolescents, empower school cafeterias and increase the coverage of schools with cafeterias.

Key messages:

- In Armenia, adolescents' eating behaviors are mainly influenced by taste, availability, and affordability of food choices, eating behavior of peers and advertisements.
- Government needs to increase the coverage of schools with cafeterias and empower school cafeterias, so that they suggest healthy, tasty and affordable food choices.

Food ''from the Outside'' and Correct Nutrition for Outpatients

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Background:

It is a common custom to visit patients in hospital. Visitors often bring along outside food products, including some that may not be recommended for the patient. Even so, neither the Ministry of Health nor the hospitals have explicit guidelines in place as to what people can and cannot bring their inpatient friends or kin. The study deals with three main questions: What are the patterns of spending on outside food products for inpatients? What are the types of food products brought for inpatients? How medical professionals view the matter?

Methods:

This quantitative study uses three closed-structured-questionnaire surveys-among visitors, inpatients, and medical staff. Thematic analysis of the findings yields patterns of spending on outside food products for inpatients, the types of food products brought, awareness of the health implications of consuming these products, patterns of consumption among inpatients, and how medical professionals view the matter.

Results:

There are five major findings: (a) Most expenditure on outside food for inpatients occurs in the first few days of hospitalization. (b) Most food brought to inpatients is not defined as healthy. (c) There is a gap between visitors' awareness of the health implications of bringing food to inpatients and their actual conduct. (d) Most patients realize that the food brought to them is bad for their health but tend to eat it anyway. (e) Medical staff disapproves of bringing food to inpatients.

Conclusions:

Information on the extent of bringing food to inpatients, and the types and nature of what is brought, sheds light on the question of food security among inpatients, with emphasis on the motive behind the (in)correct nutrition. Information about the attitudes of patients, visitors, and medical staff toward the need to continue bringing food sheds light on questions of equality and social justice in inpatient care.

Key messages:

- Healthcare services should be more aware of assuring inpatients' right to correct nutrition in the senses of reducing inpatients' exposure to externalities that may impede their convalescence.
- Healthcare services should be more mindful of the advantages of using the egalitarian nutrition system that hospitals operate for all patients.

Evaluation of growth monitoring activity in Yopougon-Est Health District (Abidjan, Côte d'Ivoire)

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Background:

Malnutrition represents 11% of disease burden in the world and is an underlying cause of 45% of under-5 deaths. Prevention is paramount in the fight strategy. That is why, ''growth monitoring'' which goal is to prevent and to detect malnutrition, has been integrated into health programs. In Côte d'Ivoire, although this activity is carried out in the health centers and despite the existence of Guidelines to improve services, under-5 malnutrition prevalence remains above thresholds. Our purpose was to assess the gap between the National Guidelines for growth monitoring and the practices of health workers.

Methods:

A descriptive cross-sectional study was conducted in all the 6 public health centers of Yopougon-Est District, from August 22 to September 05, 2018. Data were collected using an observation grid developed from the Guidelines and 3 questionnaires. Six growth monitoring sessions were observed; 6 responsibles, 9 health workers assigned to the activity and 133 mothers came to monitor their child were interviewed after informed consent.

Results:

The growth monitoring sessions were held every working day in 4 centers. Half of health workers assigned to the activity had not received training. All centers had baby scale, 5 had horizontal height, but only one had vertical height and person scale. Most health workers (78%) were not aware of Guidelines. The steps of ''interrogation and examination'' component were only 58% completed. The steps for weight measurement were completed at 96% and at 70% for size. The nutritional status of children was evaluated in only one center. In no center, health workers traced growth curve. Nearly half of the mothers surveyed (45%) had not received counseling during their visits.

Conclusions:

The study highlighted shortcomings that do not allow the achievement of growth monitoring objectives. This study cannot be extrapolated however it raises real questions about the quality of the services provided in health centers.

Key messages:

- An evaluation at large scale needs to be conducted and corrective actions to be taken to improve the growth monitoring activity for effective prevention and early detection of malnutrition.
- Growth monitoring will be effective in preventing malnutrition only if it is well conducted by health workers.

Impacts of post-Brexit agricultural policy on fruit and vegetable intake and cardiovascular disease

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Background:

The post-Brexit agricultural regime represents an opportunity to positively influence food systems and improve public health. Health-improving measures could include expanding the UK production of fruits and vegetables (F&V), thus increasing F&V availability. Currently, only 1.4% of total agricultural land in England is allocated to F&V. This study aims to estimate the potential impacts of allocating additional land to F&V production on cardiovascular disease (CVD) and inequalities in England between 2021 and 2030.

Methods:

We used the previously validated IMPACT Food Policy model to translate changes in land allocated to F&V into changes in F&V intake and associated CVD mortality, expressed in number of deaths prevented or postponed (DPPs) by age, sex, and Index of Multiple Deprivation (IMD) quintile. We modelled two scenarios that assumed a linear increase in agricultural land allocated to F&V until it covers a) 10% and b) 20% of all land suitable for production of horticultural crops in England. We assumed that F&V prices would drop to a new equilibrium. We used Monte Carlo simulations to produce uncertainty intervals.

Results:

Our model suggested that by 2030, F&V intake might increase by approximately 4% (95% Uncertainty Interval: 2%-7%) and 8% (4%-13%) respectively, under the first scenario. Under the second scenario, F&V intake could increase by approximately 17% (10%-29%) and 37% (26%-51%) respectively. These increases in F&V intake were associated with 3360 (1760-5920) CVD DPPs under the first scenario and 15700 (9000-24310) under the second scenario in 2021-2030. Our modelled scenarios could also reduce inequalities, with some 16% of DPPs occurring in the least deprived group compared with 22% in the most deprived.

Conclusions:

Policymakers should consider the public health impacts of the post-Brexit agricultural regime in England. Increasing the land allocated to F&V production could substantially reduce the burden of CVD and associated inequalities.

Key messages:

- The post-Brexit agricultural policy can be an opportunity to improve diet and public health in the UK.
- Increasing the agricultural land allocated to fruit and vegetable production in England could reduce the burden of cardiovascular disease and associated inequalities.

Integrated veterinary-medical activity on characterization of shigatoxin producing Escherichia coli

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Background:

Shiga toxin-producing Escherichia coli (STEC) are an important public health concern as they cause severe conditions (bloody diarrhea and hemolytic uremic syndrome - HUS) and have epidemic potential. Cattle are the main reservoir for the highly virulent STEC O157 strain, and other HUS-associated non-O157 strains. This study aimed to characterize strains from animals and humans and to compare their molecular profiles. Animal isolates were tested for the presence of virulence factors correlated to their pathogenic potential.

Methods:

74 STEC human isolates from 43 clinical cases (sporadic or epidemic) and 270 animal isolates from feces from 62 cattle farms were collected. Epidemiological investigation to collect environmental and suspected food samples was carried out for 22 cases. All isolates were typed with PFGE and their serotype was defined by Real-Time PCR. Animal isolates were also tested for the presence of subAB, saa, tia, cfk, adfO, hlyA, efaI1-lifA5'3', and toxB virulence genes.

Results:

O157 was detected in 44% of human cases, other relevant serogroups O26, O111, O103, O145 in 21, 9, 5 and 5% of cases, respectively. The source of infection was identified in one case (cheese contaminated by a O157 strain). Among animal isolates 2, 0.7, 0.7 and 0.3% were identified as O157, O11, O113, and O145, respectively. PFGE highlighted a high heterogeneicity among animal strains, however no pulsotype common to cattle and clinical isolates was found. adfO, cfk, efaI1-lifA5'3' and toxB were found significantly correlated to eae (intimin).

Conclusions:

Human and cattle strains were not correlated, however STEC diversity in cattle was very high and included some strains potentially pathogenic to humans. For this reason, upholding an integrated surveillance is very important.

Key messages:

- Serotypes relevant to human health were found in cattle in a small but not negligible frequence.
- No direct correlation was found between animal and clinical isolates.

Effect of lifestyle on blood pressure in Portuguese population under antihypertensive drugs

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Background:

Hypertension is one of the main risk factors for disability and death from cardiovascular diseases. Current guidelines include initiatives to control blood pressure values in hypertensive patients that focus on lifestyle changes. The main objective of this study was to estimate the association between lifestyle and blood pressure in patients under antihypertensive drugs.

Methods:

An analysis of the data of Portuguese Health Examination Survey (INSEF) was performed. Individuals who met INSEF inclusion criteria and who referred to be under antihypertensive drugs in the two weeks prior to the questionnaire were studied. Lifestyle variables (alcohol consumption, smoking, additional salt intake, fruit and vegetables consumption, practice of physical activity) were measured by questionnaire, and blood pressure values were obtained by physical examination. Associations between lifestyle factors and blood pressure, stratified by sex and adjusted to sociodemographic variables and to obesity, were estimated through a multiple linear regression model.

Results:

Alcohol consumption ($ß = 6.31$, $p = 0.007$) and smoking ($ß = 4.72$, $p = 0.018$) were associated with systolic blood pressure in men. Additional salt intake, fruit and vegetable consumption, and practice of physical activity were not associated with blood pressure in men. In women, no association was observed for any behavioural variable.

Conclusions:

These conclusions reinforce the need, also in the population under antihypertensive drugs, particularly in the male sex, to focus the fight against high systolic blood pressure in these two modifiable and preventable behaviours: smoking and alcoholic consumption.

Key messages:

- Alcohol consumption and smoking are the behavioral determinants associated with high systolic blood pressure values in men under antihypertensive drugs.
- These conclusions reinforce the need to focus the fight against high systolic blood pressure in the preventable and modifiable behavioural determinants.

Visual food diary - peer support and better diet quality

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Background:

Healthy Life -groups are targeted to patients with symptoms of metabolic syndrome, problems with coping or overweight at public health centers in Helsinki. The aim of one-year Healthy Life -group is to give support for self-care and empowerment. The groups are generic, and each participant sets her own goal such as smoking cessation, alcohol or weight management.

Methods:

To create opportunities for positive and empowering diet intervention for working aged population, we have started a pilot study with visual food diary (MealLogger). The nutritionist are coaching the three-month-intervention aiming at improving the diet quality. Participants share photos of their meals with each other and receive peer support.

Results:

During years 2016 - 2018, 445 completed the one-year intervention in Healthy Life -groups. The mean decrease of weight loss was 4 kg (n = 222) and decrease of waist circumference 5 cm (n = 57).

Conclusions:

Since the goal for most participants was weight loss, we decided to offer a modern intervention with MealLogger-application. During year 2019 we will complete six groups (about 100 participants) and we will measure participants food quality, weight, waist circumference, quality of life. The results we report in the autumn.

Key messages:

- To manage overweight epidemic, new prevention strategies are needed in the primary health care.
- Visual food diary enables positive and empowering approach to improve died quality and weight management.

Evaluation, recommendation and implementation of the local hospital catering system

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According to the literature the prevalence of the risk of malnutrition o hospitalized people exceeds 25% of patients, this evidence is also related to low meal satisfaction. To reduce hospital malnutrition it is also important to improve the consumption of meals by implementing organoleptic and nutritional quality (O&NQ).

The Local Health Agency of Trieste (ASUITS) has conducted surveys to find out how to evaluate and improve the procurement qualifications of hospital catering systems (HCS) and how to implement O&NQ. The production processes of meals served in two clinics using Cook Chill (CC) and Cook/Fresh - Hot Hold (CFHH) production process, respectively, were evaluated from 2017 - 2019. The Nutrient Analysis Critical Control Point process was applied for the evaluation of two catering systems. In addition, the antiradicalic power (ARP) of 120 samples of meals by the University of Trieste was analysed. In 2019 an investigation was conducted to compare the satisfaction and ARP content of meals served to patients in two hospital wards (N = 60). The meals to patients of two wards respectively with CC Cold Plating Retherm (PR) and CC Hot PR were served.

Meals produced by the CC production process highlight the average loss of 50% of ARP compared to the CFHH. Meals produced by the CC Cold PR method limit the loss of ARP by 15-40% less compared to the CC Hot PR method. The satisfaction of patients who have consumed meals produced by the CC Cold PR method is double compared to that of patients who have consumed meals produced by the CC Hot PR method. The surveys have produced significant evidence to evaluate hospital meal production processes and to improve O&NQ. The results were used to develop recommendations for the drafting of tender specifications capable of also protecting nutritional variables.

The evaluation of the O&NQ of HCS represents a central determinant of food safety and nutrition security and must be taken into consideration in the procurements procedure.

Key messages:

- Hospital catering contracts must evaluate and guarantee organoleptic and nutritional quality.
- Integrated evaluation of organoleptic and nutritional quality is an integral part of hospital meals.

Integrated guide for public procurement and private contracts of collective catering system and SDGs

Giulio Barocco

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Surveys (2008-2018) carried out by the Local Health Agency of Trieste (ASUITS) in local collective catering (CC) services of schools, hospitals, nursing homes, and workplaces (25.000 daily meals) have shown some non - adherence to healthier food choices, food standards, procedures and green and social procurement as recommended by the WHO, FAO, UE, Ministry of Health and of Environment.

The purpose of this project is to support local public and private organizations in transforming the national and regional catering services food standards related to health, nutrition, environment and social criteria into food procurement and food contracts specifications. This has been done by compiling the major obstacles to improved standards observed during surveys, and by sharing critical and relevant examples with major public contractors across local, regional and national level.

The guidelines (GL) for public procurement of CC consist of five chapters: the elaboration of specifications; a response module to present the offer of services; selection and award criteria, an evaluation system of offers, and the technical specifications attached. Technical information fixes the constituent elements of the service in order to have similar and directly comparable offers. GL cover both the purchasing of food and the contracting of catering services. In this way public or private institutions are able to prepare tender documents suitable to respond to health, economic needs and Sustainable Development Goals (SDGs).

The development of the GL has increased the awareness and real potential that local organizations have in enhancing the strategic use of purchasers to boost food qualification, jobs, growth and investment. As well as to create a more innovative economy, to be resource and energy efficient, and to be socially-inclusive.

To meet population nutrient intake goals and SDGs it is necessary to increase co-operation and the sharing of the objectives of 'Health in All Policies'.

Key messages:

- Contractors need practical tools to apply sustainable development goals criteria in collective catering.
- The integrated collective catering guide is a key to improving capacity building in institutions.

An Investigation of Family Nutrition and Physical Activity and Affecting Factors in Primary Schools

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Background:

In this study, it was aimed to determine the family nutrition and physical activity status of primary school students and some affecting factors.

Methods:

In this descriptive and correlation-seeking research, mixed sampling methods were used. The sample size was not calculated, it was aimed to reach all students in three primary schools with different socioeconomic status (high, medium, low) in Uskudar, Istanbul. Data from 727 subjects were collected through an introductory information form and The Family Nutrition and Physical Activity Screening Tool (FNPA).

Results:

In the study, data from 294 (49.7%) girls and 297 (50.3%) boys from three primary schools who studied first grade (n = 321, 54.3%) and 4th grade (n = 270, 45.7%), a total of 591 children were used. The total FNPA score of students in schools with high or middle socioeconomic status was significantly higher than the socioeconomically low school ($P < 0.001$). The mean score of the scale was significantly higher in those who doesn't eat junkfood or snacks ($P = 0.001$), who had regular breakfast ($P = 0.001$) and people with regular meal time ($P = 0.001$). The mean BMI of children in the middle socioeconomic status school was found to be significantly higher than that of students in the low socioeconomic status school ($P = 0.013$). There was also a significant correlation between the mean BMI of mothers and the total FNPA score ($P < 0.001$).

Conclusions:

In the study, as the socioeconomic status of schools increased, FNPA total score increased as well. Although some studies suggest that family income and socioeconomic status are inversely related to childhood obesity, in this research the mean BMI of children in the socioeconomically middle school was significantly higher than the students in the socio-economically low school.

Key messages:

- The evaluation of the nutritional and physical activity status of the family as an element of the obesogenic environment, may be effective on identifying the causes of childhood obesity.
- Studies to determine the nutritional and physical activity of the family in preventing childhood obesity are essential.

Customer satisfaction survey in Friuli Venezia Giulia university canteens

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Background:

Customer satisfaction represents an innovative approach to measure strengths and weaknesses of an organization and is useful for a customer-focused management and culture development. Our survey's aim was to investigate perceived quality and needs of customers in the university canteen sector.

Methods:

Between April and June 2018, an anonymous online questionnaire was distributed by ''agenzia regionale per il diritto agli studi superiori'' (ARDISS) among university students in Friuli Venezia Giulia, Italy. The questions covered 3 thematic areas: attendance of the service, quality of services and opinions on new initiatives. Furthermore, there was an open question to collect students' suggestions or proposals to improve the service. Satisfaction about the service was evaluated through five topics: environments, hygiene, staff, meals, global satisfaction. Collected data were analyzed with descriptive, univariate and multivariate analyses. Statistical analyses were performed using 9.4 SAS software.

Results:

Response rate was 20.5% (1933/9404). Multiple logistic regression analyses showed a difference in meal choice (entire vs reduced) between institutional canteen and partner cafeterias users ($p < 0.0001$) and that male ($p < 0.0001$) and foreign students (p 0.0003) prefer entire meal instead of reduced. Percentage of students who prefer entire meal is reduced ($p < 0.0001$) if price range increases. Univariate and multivariate analyses showed that high quality perception is associated with lower price range and no suggestions about food and environments ($p < 0.0001$); multivariate analyses also showed an association between high quality perception and high canteen attendance ($p < 0.05$).

Conclusions:

The survey showed an association between meal choice and students' profile and between perceived quality and customer's features. These data and further analyses may help to select areas where an intervention could improve service quality and, therefore, customer satisfaction.

Key messages:

- Customer satisfaction is an important tool to measure and improve university canteen service quality.
- These results helped us to identify services' strengths and weaknesses according to students' opinions; this could be useful to select improvement areas.

Main sources of information on nutrition of various socio-economic groups

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Backgroud:

For effective non-communicable disease prevention and health promotion programs, it is very important to know from where the targeted audience gets all the information on nutrition (NI). The shortage of this information lead to the aim of this study - to determine the main sources of NI of various socio-economic groups.

Methods:

Cross-sectional study was conducted in 2019. 1007 residents of Lithuania aged 18-75 were surveyed by anonymous questionnaire. Survey was carried out by using multi-stage stratified random sampling. Chi square test was used for the data analysis.

Results:

More than half respondents (58.6% (95% CI: 55.5; 61.6)) indicated that one of their main sources of NI is internet, 47.2% (95% CI: 44.1; 50.3) of respondents trusts television and radio. Only one third of residents (36% (95% CI: 33.1; 39.1)) indicated physicians and pharmacists as the main source of NI and only 20.6% (95% CI: 18.2; 23.2) of them received NI from specialized nutrition and health magazines. Younger people were more likely to choose internet as the main source of NI (65,7%, 58%, 54,1% accordingly ($p = 0.004$)). Internet as the main source of NI was significantly related to residence, education, income and marital status. The number of respondents who identified television as the main source of IN was significantly higher among the rural population (53.2%) and small-town population (52.9%) than among the population of big cities (39.4%) ($p < 0.0001$). Choosing television as one of main source of NI was significantly related to age, education, income and marital status. 24.3% of women and 16.4% of man indicated that the main source is specialized nutrition and health magazines ($p = 0.002$).

Conclusions:
Best place for spreading NI is internet and television. When trying to target young people the best place is internet and for targeting senior citizens NI is better to carry out by television and radio.

Key messages:

- Most population gets information about nutrition from internet and television.
- Most young people gets information about nutrition from internet and most older people gets information from television and radio.

Determination of Orthorexia Nervosa Symptoms and Eating Attitudes in Medicine Students

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Background:
Orthorexia Nervosa (ON) is defined as obsession with healthy eating. It is known that the purity is more important than amount or energies of consumed food in people with ON.With this condition,ON results in restrictions on food intake in individuals.According to the literature, health professionals are in the risk group of ON. The aim of this study is to examine orthorexia nervosa symptoms and eating attitudes of medicine students.

Methods:
This cross-sectional study was conducted on 298 students who educated Inonu University Faculty of Medicine in 2017.Data collection tools were General Information Form,ORTO-15,EAT-40.SPSS 22.0 and Pearson Exact,Fisher's,Chi-Square tests were used for statistical analysis.

Results:
%76.2 of students had orthorexia tendency, %11.1 of students had eating disorders. 24 aged students were found to less orthorexic than others and obese students tend to have less orthorexic than others. It was found that when reached true information about nutrition, individuals who changed their eating behavior always had more orthorexic than rarely. It was found that when reached true information about nutrition, individuals who changed their eating behavior always had more eating disorders rate (EDR) than others. It was found individuals who received information from book-scientific publications had EDR than others and individuals who received information from dietitians had higher EDR than those who did not ($p < 0.05$). In addition, %12.3 of the individuals who tend to orthorexia and %7 of the individuals who tend to without orthorexia were found to have eating disorders.However,the difference between groups was not statistically significant ($p > 0.05$).

Conclusions:
According to our results, it is emphasized that question which "Is ON an eating disorder?". In addition, we believe that our study will contribute to the literature because ON, eating attitudes and information sources of nutrition are examined together on medicine students.

Key messages:

- When individuals have access to nutritional information, behavior change states affect the tendency to orthorexia nervosa and eating disorders.
- Nutritional and psychotherapeutic interventions for behavioral regulation of individuals are thought to reduce the tendency of orthorexia nervosa and eating disorders.

Early feeding profiles based on breastfeeding, infant formula and introduction of solid foods

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Background:
As early feeding practices may be related with allergy at older age, we aimed to investigate infant-feeding profiles in the first year of life and their determinants in the PARIS (Pollution and Asthma Risk: an Infant Study) cohort.

Methods:
This study included 3446 infants. Feeding data was collected using standardized questionnaires at 1, 3, 6, 9 and 12 months. At each time, we considered 6 variables such as (i) breastfeeding (no, mixed, exclusive), consumption of formula (no, yes): (ii) regular formula, (iii) hypoallergenic, (iv) with pre-/probiotics, or (v) extensively hydrolyzed/soya, as well as (vi) solid foods introduction (no, yes: 0, 1, ≥ 2 allergenic foods). Children with similar feeding profiles over the first year of life were grouped together using multidimensional longitudinal cluster analysis. Socio-demographic and health determinants of these profiles were examined using multinomial logistic regression models.

Results:
Five distinct profiles were identified. Profile 1 (45%) included children mainly fed with regular formula. Children from Profile 2 (27%) were exclusively breastfed during the first 3 months. Children from the other three profiles were moderately breastfed and differed regarding the type of formula consumed: pre-/probiotics for Profile 3 (17%), hypoallergenic for Profile 4 (7%), or extensively hydrolyzed/soya for Profile 5 (4%). Profiles did not seem to differ regarding timing of solid foods introduction, except Profile 5 starting later. Compared to Profile 1, children from Profiles 2 to 5 were more likely to have parental history of allergy and higher family socioeconomic status (SES). Profile 5 appeared to be influenced by early health outcomes such as eczema or food reactions.

Conclusions:
We identified different early feeding profiles. Parental history of allergy, SES and early health outcomes seem to be important determinants of these profiles. Associations of these profiles with the development of allergic disease will be studied.

Key messages:

- These results are important to better understand early-life feeding practices and their contributors.
- Their possible role in helping to prevent allergic diseases in later life will be further studied.

Background characteristics of meat consumption exceeding the Finnish Dietary Guidelines in 2000-2017

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Background:
Abundant consumption of animal-based foods such as red and processed meat pose a threat to sustainability and public health. This study clarifies how the share of the population group with high red and processed meat consumption has changed in the past two decades.

Methods:
We used data of four Finnish cross-sectional surveys: Health 2000 (n = 5976), DILGOM 2007 (n = 4874), FINRISK 2012 (n = 4812), and FinHealth 2017 (n = 6010) concerning 25-74 year-old subjects (in year 2000 30-74 year-olds). Habitual food consumption over the past 12 months was assessed with a validated130-item food frequency questionnaire (FFQ) and daily meat consumption was computed. Questionnaires inquired on general background factors. The risk in belonging

to the meat consumption quintiles exceeding the Finnish Dietary Guidelines (500 g /week) was examined with logistic regression analyses.

Results:

In 2000, consuming more meat than recommended was more probable among men and those with lower or middle educational level. In 2007 and 2012, in addition to gender and education, having middle or higher income level and belonging to the age group of 35-44 years was associated with higher meat consumption. In 2017, meat consumption was higher among men, those with lower educational level and among 45-64 years old, but no income level differences were observed.

Conclusions:

Actions aiming to reduce meat consumption should be targeted to those consuming the largest amount of meat: men, middle-aged, and those having lower educational level.

Key messages:

- The group consuming more meat than recommended has remained stable in the 21th century to include more often men, middle-aged, and people having lower education but income has become non-significant.
- Identification of population groups with high meat consumption helps to better design and target the interventions and to change the consumption patterns in a healthier and more sustainable direction.

Drinking water quality: results from the data analysis in Lombardy region

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Background:

Ensuring access to safe and quality drinking water is an essential aspect of public health, as well as a fundamental human right as an extension of the right to life affirmed by the Universal Declaration of Human Rights. Previously in Lombardy, the reporting of water sampling control activities was prepared only by the local health authorities (LHAs). Recently, however, the activation of a data centralization information system allows the monitoring of the whole regional territory and the elaboration of a periodic report.

Methods:

The data relating to the analytical checks on drinking water in the Lombardy Region were extracted from the regional database for 2014, 2015 and 2016 and grouped by 'Chemical', 'Microbiological' and 'Indicators' parameters.

The analysis focused on the number and analytical compliance of all the samples performed. All the results considered both the overall regional data and each LHA.

Results:

From a quantitative point of view, the activity of entering the sampling data seems to progressively improve, remaining rather heterogeneous among the various LHAs.

From a qualitative point of view drinking water in Lombardy is to be considered good overall: both the chemical and microbiological non-compliant samples in Lombardy are lower than 10% for the years 2014 and 2015 and lower than 5% in 2016 thus indicating an apparently improving trend.

Conclusions:

For a better evaluation of the numerical appropriateness of the controls carried out, an update of the registry system of the supply areas and a more uniform LHA programming is necessary.

For a better assessment of the quality of water destined for human consumption oriented to the conformity of parameters, it is necessary to adopt an analytical judgment system on individual parameters instead of on the entire sample. A further improvement will be the inclusion in the database of the data of the aqueduct managers included in the Water Safety Plans (WSPs).

Key messages:

- Water quality assessment and its control activity reporting is an essential aspect in public health prevention.
- It is essential to strive for continuous improvement in the data collection method to better monitor potential risks and to evaluate the best future safe water supply strategies.

Breastfeeding knowledge and attitudes of young people

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Background:

One of the World Health Organizations (WHO) global nutrition goals by 2025 is to increase the rate of exclusive breastfeeding of infants under six months to at least 50%, which can be achieved only through educating future parents on the importance of breastfeeding. The goal of this research was to establish the current effects of the public health campaigns in raising awareness on breastfeeding by analyzing the opinions of young people towards maternal milk.

Methods:

The study was conducted as a prospective study for six months in 2018. and in 2019. 281 people participated (158 female, 123 male) of whom 127 psychology students.The participants had no children, and were aged between 18 and 26.. The survey consisted of socio-demographic questions and the Iowa Infant Feeding Attitude Scale (IIFAS) with 17 questions. Data processing included methods of descriptive and inferential statistics using the MedCalc program. Values of $p < 0{,}05$ were considered statistically significant.

Results:

More than one out of two female and almost two out of five male participants recognized milk as a diet optimal for their infant (53% female, 38% male). Over twice as many participants considered maternal milk to be extremely positive in comparison to baby formulas as positive. Only 12% of respondents acknowledged that infants had beneficial effects from breastfeeding throughout their lives.

Since only 12.8% of infants in Serbia are exclusively breastfed (according to the available data), the public health authorities need to take more drastic measures in order to complete the WHO set goal by 2025.

Key messages:

- Current public health campaigns aren't showing sufficient effects.
- Both sexes need to be included in education process about the importance of breastfeeding.

Risk assessment of Portuguese population to multiple mycotoxins: the human biomonitoring approach

Carla Martins

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Mycotoxins constitute a relevant group of food contaminants with several associated health outcomes such as estrogenic, immunotoxic, nephrotoxic and teratogenic effects. Although scarce data are available in Portugal, human biomonitoring studies have been globally developed to assess the exposure to mycotoxins at individual level.

The present study concerned the analysis of mycotoxins in 24h urine and first-morning urine paired samples from 94 participants enrolled within the scope of the National Food, Nutrition, and Physical Activity Survey of the Portuguese General Population (2015-2016). Following a salt-assisted matrix extraction, urine samples were analyzed by liquid chromatography-mass spectrometry for the simultaneous determination of 37 urinary mycotoxins' biomarkers and data obtained used to estimate the probable daily intake as well as the risk characterization applying the Hazard Quotient approach.

Results revealed the exposure of Portuguese population to zearalenone, deoxynivalenol, ochratoxin A, alternariol, citrinin and fumonisin B1 through the quantification in 24h urine and first-morning urine paired samples. Risk characterization data revealed a potential concern to some reported mycotoxins since the reference intake values were exceeded by some of the considered participants. Alternariol was identified for the first time in urine samples from a European country; however, risk characterization was not performed due to lack of reference intake value.

The present study contributed with reliable and evidence-based results, and confirmed that mycotoxins represent a burden and are part of the human exposome of the Portuguese population. Further studies are needed to shed a light on the determinants of exposure in order to contribute for the promotion of public health measures to reduce the mycotoxins' exposure in Portugal.

Key messages:

- Portuguese population is exposed to mycotoxins, chemical food contaminants that may be harmful (carcinogenic, immunotoxic, mutagenic, teratogenic, hepatotoxic) for human health.
- Human biomonitoring studies provide realistic data on internal exposure at individual level, allowing a more accurate knowledge of the determinants of exposure to these contaminants.

Burden of disease attributable to exposure to aflatoxins in Portugal using Human biomonitoring data

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Human biomonitoring (HBM) is recognized as an important tool to assess the Human exposure to chemicals, contributing to describe trends and patterns of exposure over time and to identify population groups that could be under risk. Natural chemicals as mycotoxins, fungi metabolites that produce toxic effects in humans, are important compounds that could be found in foods usually consumed worldwide in a daily basis. Mycotoxins as aflatoxins (AFTs) are genotoxic, carcinogenic and immunosuppressive compounds. Hepatocellular carcinoma (HCC) is one of their main health toxic effects and is the third leading cause of cancer deaths worldwide. In Portugal, scarce data are available regarding exposure to AFTs and none previous study used HBM data to characterize comprehensively the burden associated to this exposure.

In the scope of the National Food, Nutrition, and Physical Activity Survey of the Portuguese General Population (2015-2016), 24h-urine samples from 94 participants were analyzed by liquid chromatography-mass spectrometry (LC-MS/MS) for the simultaneous determination of AFTs (B1, B2, G1, G2, M1). A model was developed to estimate the health impact of the exposure of Portuguese population to aflatoxins, estimating the number of cases of HCC and DALYs attributed to AFTs exposure.

AFTs were detected in 12.8% (AFB1), 16.0% (AFB2) and 19.1% (AFM1) of the 24h-urine samples. The estimated number of extra cases of HCC attributed to this exposure ranged from 17 to 65 cases/year; the associated DALYs for the Portuguese population ranged from 284 to 1802 years.

The present study generated, for the first time and within a HBM study, reliable data regarding the exposure of the Portuguese population to AFTs. These data were crucial to characterize the health impact associated to AFTs exposure and to support risk managers to establish preventive policy measures that contribute to ensure the public health protection.

Key messages:

- Portuguese population is exposed to aflatoxins, chemical food contaminants that may be harmful (carcinogenic, immunotoxic, mutagenic, teratogenic, hepatotoxic) to humans.
- Human biomonitoring studies provide realistic data on internal exposure at individual level, contributing to a more accurate estimation of the burden derived from this exposure.

Dietary polyphenol intake and socioeconomic status in adult russian/siberian population

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Background:

Polyphenol consumption from polyphenol-rich foods (tea, coffee, fruits, vegetables at all) is inverse associated with the risk of cardiovascular- and other noncommunicable chronic diseases and varies in different regions due to dietary habits, as well as by socioeconomic factors.

Methods:

Participants: the Siberian urban population (Novosibirsk, HAPIEE study, 9324 (4,249 men and 5,075 women) aged 45-69 years. Dietary data collected using a 141-item food frequency questionnaire. Data on the polyphenols were taken from the Phenol-Explorer database (version 3.6). Total polyphenols (TPH) were considered as a sum of all individual classes: flavonoids, phenolic acids, stilbenes, lignans and other polyphenols and their food sources. Socioeconomic status included gender, educational, occupational and marital status.

Results:

The main sources of TPH were tea, coffee, fruits, vegetables and rye bread. Average total polyphenol consumption was 1273 (647) in men and 1203 (626) mg/day in women ($P < 0,05$). By occupational status, consumption of TPH in unemployed men was lower - 1139 (442) mg/day vs 1282 (648) in employed, working pensioners and unemployed pensioners ($P < 0,05$). The consumption of TPH in women: in unemployed pensioners: 1176 (613) vs 1220 mg/day in employed and working pensioners. The main polyphenols intake in all occupational groups were flavonoids (66,1-67,6 % total polyphenols), followed by phenolic acids (21,4-22,3%). TPH consumption in groups with less education than primary in men was lowest: 1052 (476) mg/day vs 1273 (646) ($P < 0,05$ vs men with higher education). In men and women with high education was highest consumption of lignans. The maximum consumption of polyphenol compounds was established in groups of married men and women:1279 (646) and 1231 (632) mg/day, respectively, P < 0,05 vs single individuals.

Conclusions:

The consumption of polyphenol compounds in the Siberian urban population is determined by the socioeconomic status.

Key messages:

- The main individual classes of polyphenols consumed in all educational and marital status groups were the same as in the employment group: flavonoids, followed by phenolic acids.
- Recommendations for consumption of polyphenol compounds for the prevention of chronic non-communicable diseases in Siberia should consider the socioeconomic status of the population.

Estimating the burden of disease of exposure to chemical contaminants in food in Denmark

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Background:

Recent global estimates have shown that dietary exposure to chemical contaminants cause over 56,000 deaths and 9 million healthy life years lost each year. However, the contribution of causative agents varies greatly between world regions and countries due to local food consumption and contamination. To prioritize public health interventions to reduce disease burden, national-level risk ranking evidence is needed. The overall aims of this project are to estimate the burden of disease (BoD) of selected chemical hazards in foods consumed in Denmark, and to identify the relative contribution of foods.

Methods:

We identified chemicals on the basis of their presumed public health impact. The final list of chemicals was defined in agreement with the Danish Veterinary and Food Administration, and included: methylmercury, inorganic arsenic, cadmium, acrylamide, dioxin/dioxin-like PCBs and lead. We estimated BoD in terms of disability adjusted life years (DALY) in a model combining exposure assessment with dose response models to derive probabilities of health effects, taking an incidence-based approach. Data were collected from the Danish National Survey of Diet and Physical Activity, food monitoring, literature, and national statistics.

Results:

We estimated that methylmercury, inorganic arsenic, cadmium and acrylamide lead to a BoD of 514 DALY (95% uncertainty interval: 185, 990) in 2016 (preliminary results). Estimates for lead and dioxin/dioxin-like PCBs are pending. Methylmercury exposure from fish was the greatest contributor to overall burden (478 DALY), and acrylamide from potato products the second (30 DALY). The health outcomes leading to highest burden were intellectual disability and cancer.

Conclusions:

Our estimates will assist public health managers identifying the chemical contaminants in foods with the highest impact on public health in Denmark. Future research should focus on estimating the effect of mitigation strategies on the disease burden.

Key messages:

- We provide national quantitative evidence of the health impact of chemical exposures from foods.
- Information on the relative contribution of foods and population groups affected may focus mitigation.

DI Health assessments: impact, technology

Evaluation of the effects of health impact assessment (hia) practice in monteregie

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This study explores the effects of the collaborative model of health impact assessment (HIA), as deployed in Monteregie (Quebec), on the development, adoption and implementation of municipal projects that include health considerations.

Nine HIA processes were studied in nine territories and 35 individuals were interviewed. Data collection was based on the six steps of contribution analysis, and included document analysis, semi-structured interviews, and on-site observations.

The study results showed that the HIAs had varying results. First, the actors involved acquired new knowledge. However, the HIAs had little impact in terms of increasing the municipal actors' awareness of health issues. Rather, it helped them acquire arguments for raising awareness among and convincing their municipal council members of the merits of certain actions and their potential positive impacts on citizens' health. In fact, the HIAs were generally undertaken by municipal actors already aware of the importance of promoting citizen health. Second, in a few of the HIAs, some recommendations were integrated into planning documents, but usually the HIA report constituted an additional planning document and was not merged with the original planning documents. Lastly, following the HIAs, most of the municipal actors continued to include health considerations in their subsequent planning of public policies and projects.

Prerequisites for effective HIA include the presence of municipal actors who are aware of the importance of their role in their local population's health, municipal policies that include health considerations, and the municipality's active participation in the HIA process.

This study sheds light on the complexity of the factors that ensure HIA impact on municipal decision making and decisions.

Key messages:

- HIA have a significant impact to change municipality practice.
- The HIA process is crucial in order to have an impact on municipal projects that include health considerations.

Nursing community 2.0: a method to promote online collaborative learning

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This article describes a project seeking to establish an online community of practice involving nurses in Sicily, known as Nursing Community 2.0. The Community has initially involved 585 Sicilian nurses who took part in the residential activities. They had been selected thorough a questionnaire addressed to measure the initial technological competencies. All students - registered on open source LMS (Moodle) - attended DL courses promoted by CEFPAS (Centre for training and Research in Public Health located in Sicily). To promote collaborative Learning, Learning Community provided 4 areas: Forum, to confront and to debate about professional interests moderated by a renowned nurse; Camera Cafè, a virtual ''agora'' to change opinion without a moderator; The corner of the joke; a Tweetboard; Project work Area, where the Topic has been developed to be presented during the last examination. Indeed, the project was designed to provide nurses with a space for building collaborative relationships, exchanging professional knowledge and practices, developing competencies, shaping organizational policy and reporting Adverse Drug Reactions. The quality of solutions will depend on the professional and on the nature of the competencies to be developed. The impact of a training initiative addressed to an adult public through the technological tool, depends both on the interest for the topic and on the ability of the user to manage own training, to acquire familiarity with network services and technologies and, when it occurs, to be able to autonomously cope with training using technologies useful to get information and knowledge to be used to solve a specific professional problem in time. Qualitative and quantitative analysis of online interactions have been carried out. Results indicate that, thanks to the deployment of suitable technology and expert tutor support, Nursing Community 2.0 has successfully established itself as an environment for generating and exchanging knowledge.

Key messages:

- Collaborative learning depends on the interest for the topic and on the ability of the user to manage learning through technological tools.
- Nursing Community gives results when learning environment generates debates and interactions.

Identification of a strategy for disinvestment in the Italian National Health Service (NHS)

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The disinvestment of ineffective or inappropriate technologies or interventions with an inadequate value for money ratio is a growing priority in order to contribute to the objectives of maintaining high quality and appropriate care and allocation of resources that guarantee the sustainability of the National Health System (NHS).The possibility of reallocating resources from obsolete and no longer appropriate technologies, allows for recovered resources to be allocated to technological innovation and therefore to the overall sustainability of the system.In order to define criteria concerning disinvestment techniques of health technologies and strategies of obsolete technologies to be applied within the Italian reference framework, we started an ongoing research project.

A systematic review of the scientific literature of the last 10 years was carried out on 5 different databases with the purpose of analyzing the international disinvestment experiences of health technologies using the Health Technology Assessment (HTA) method and focusing on orthopedic prosthesis procedure and cardiac stenting procedure.By means of National Dataset of the Italian National Institute of Health, real consumption and estimated consumption have been identified,using the Italian NHS perspective.

The preliminary systematic review retrieved a total of 548 records. Nine results were finally included. In the development of disinvestment strategies, particular attention must be paid to the identification of an integrated model between the different levels of the NHS (national,regional,local). In Italy there are no prior example of broad and complex disinvestment experiences using HTA methodologies. Effective disinvestment strategies require a systematic approach coordinated by a national body and implemented at regional level,to be extended to cascade to the organization and provision of services and services by health companies,and required to actively involve health professionals and citizens.

Key messages:

- Identifying effective strategies for disinvestment of health technologies is crucial, considering continuous health innovation and improvement and development opportunities.
- HTA methodologies, such as reassessment, could support disinvestment processes and represent a systematic and objective approach to be implemented and used at different levels of Italian NHS.

Knowledge and Attitude towards the Gradual Reduction of Salt in Bread – an Online Survey

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Background:

Bread is one of the main sources of salt intake in Portugal. Based on this evidence, a protocol signed between national Health Sector and the Associations of Industrial Bakeries, in 2017, established gradually decrease salt in bread until 2021. This measure also targets schools' available bread, this should not exceed 1g salt, to end of 2018. A pilot Health Impact Assessment (HIA) aims to assess the potential impact on salt reduction in bread on the eating habits of children (6-18 years) and their families.

Methods:

A questionnaire is being performed to assess the effect of this measure. The first version was designed by a panel of 11 experts (content validity), following the plain text principles. A external specialist revised it for facial validity. A pilot was tested. Thereafter, a REDCap online survey of ''Knowledge and Attitude towards the Gradual Reduction of Salt in Bread'' questionnaire was finalized. The target group is the parents or guardians of children and young persons, of School Clusters in the south of Portugal.

Results:

Final online survey totalizes 33 items, divided into four blocks: 1.Knowledge and General literacy data, 2.Domestic Consumption, 3.Scholar consumption and 4.Sociodemographic. An adult responsible for the child/young person should answer the survey. Access is possible through a REDCap link, using computers available in the School Cluster, or other manner suitable for the purpose.

Conclusions:

This survey will contribute to the identification of modifiable behaviors related with salt intake. Such evidence may eventually provide the opportunity for new strategies in this area.

Key messages:

- Health Impact Assessment as a procedure to assess the effects of measures and policies on human health.
- Questionnaires are a rapid tool to access perceptions, attitudes and knowledge.

Cost-effectiveness analysis of low-dose computed tomography screening for lung cancer in Hungary

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Background:

Hungary has the highest incidence of lung cancer in the world (GLOBOCAN, 2018). Since lung cancer is rarely treatable in its advanced stage, one possible way to reduce mortality is early diagnosis and subsequent treatment. The possibility and necessity of introducing low-dose computed tomography (LDCT) lung cancer screening as a public health programme is a current and relevant health policy issue.

Methods:

A Markov cohort model was built to assess the cost-effectiveness of such a risk group screening programme in Hungary. The model was populated with transition probabilities and resource utilization data derived from the HUNCHEST Hungarian lung cancer screening trial. The model results are presented in incremental cost-effectiveness ratio.

Results:

A closed cohort of 10,000 smokers with the average starting age of 59 years was followed over life-time horizon and screened for lung cancer annually until the age of 74. Compared to the current scenario of no organized lung cancer screening in Hungary, the model resulted in an additional 0.1614 life-year gained per individual and an additional 0.2924 disease-free life-year gained per individual with annual screening frequency. The incremental cost-effectiveness ratio was EUR 608 indicating that assessed intervention is cost-effective in the analyzed setting. Sensitivity analyses confirmed the robustness of the model results.

Conclusions:

Results suggest that introducing low-dose computed tomography screening for lung cancer is a cost-effective intervention in Hungary. Considering the exceptionally high incidence and mortality of lung cancer in Hungary, the population could benefit from such a risk group screening programme.

Key messages:

- Low-dose computed tomography screening for lung cancer is cost-effectiveness in the Hungarian setting.
- Policy makers are encouraged to consider the introduction of a risk group screening programme.

Digital technology interventions to reduce loneliness in adults: a systematic review

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Background:

Loneliness is an emerging public health issue and its burden is increasing in developed countries. Loneliness is associated with social, emotional, physical and mental health issues. Tackling loneliness is important to reduce its adverse impacts on individuals with loneliness and their families. Various digital technology-based interventions are used to tackle loneliness. Assessing the effectiveness of these interventions is important from the health, social care and public health perspectives.

Aim:

To undertake a systematic review of published primary research on digital technology interventions to reduce loneliness in adults.

Methods:

Databases searched: PubMed, Medline, CINAHL, EMBASE and Web of Science. Inclusion criteria: empirical research articles involving the application of digital technology interventions for tackling loneliness; participants aged ≥ 18 years and publication in the English Language from 1 January 2010 to 14 January 2019. Two researchers systematically screened articles and data were extracted from shortlisted articles applying a population, intervention(s), comparator(s) and outcome(s) (PICO) framework.

Results:

We selected 14 studies mostly from developed countries such as the US (n = 5) and Sweden (n = 3). We found a wide variation in the sample sizes (range 5-591 participants), participants' age (range 32-90, average 66.4-82.5 years) and the follow-up measurement period (6 weeks-12 months) in the selected studies. Digital technology interventions tested were Internet-based social activities and networking through video or phone calls (using Skype (n = 6) and Facebook (n = 2)), communicating via emails (n = 2). Most of the studies used the UCLA loneliness scale (n = 9) and reported reductions in loneliness in follow-up measurements compared to baseline measurements.

Conclusions:

Digital interventions are associated with reduced loneliness in adults; however, further studies such as clinical trials involving larger sample sizes are needed.

Key messages:

- Loneliness is associated with social, emotional, physical and mental health problems and the burden of loneliness is increasing, especially in developed countries.
- Digital technology interventions help in reducing loneliness in adults but further research including clinical trials involving large sample sizes and longer follow-up periods are required.

The psychometric properties of a short version of the General Self-Efficacy Scale: A Rasch analysis

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Background:

Self-efficacy is important in adolescence and is found to affect adolescents' physical activity, risk-taking behaviour and health decisions. Self-efficacy describes a person's belief in own coping abilities. Having good measures of self-efficacy may contribute to more valid knowledge about the potential role of self-efficacy as a health promoting factor in adolescents lives. Several scales measuring self-efficacy exists. One of these is the General Self-Efficacy Scale comprising 10-items. However, there exists several short versions of the scale. In a large cross-sectional study among adolescents in secondary schools in Norway, five of the items from the General Self-Efficacy Scale are used. The aim of this study is to examine the psychometric properties of this short version of the General Self-Efficacy Scale applying Rasch measurement theory.

Methods:

This study is based on cross-sectional data from the Youth Data Survey. The data collection was carried out in lower and upper secondary schools in Norway during 2018. In total, 6646 adolescents responded to a web-based questionnaire. The data were analysed using the partial credit parameterization of the unidimensional Rasch model.

Results:

Preliminary results indicated that the short version had acceptable reliability (person separation index: 0.78). However, the targeting could have been better (mean person location: 1.441). All items had ordered thresholds. One under-discriminating item and three over-discriminating items were identified. Three items displayed differential item functioning with regard to gender and one item displayed differential item functioning for school level.

Conclusions:

Based on our preliminary findings this short version of the General Self-Efficacy Scale has the potential to measure self-efficacy among adolescents, but there are room for improvements. The scale has some shortcomings related to targeting and differential item functioning that needs to be further explored.

Key messages:

- The short version of the General Self-Efficacy Scale has the potential to measure self-efficacy in adolescents.
- The scale has some shortcomings that needs to be further judged.

Unexpected effect of smoking/drinking cessation among computed tomography lung screening consumers

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Background:

Low-dose computed tomography (LDCT) screening is an innovated tool for lung cancer prevention. The findings of LDCT trials indicated that the screening could increase the motivation of smoking cessation for high-risk groups. However, none studies have investigated the associations between commercial LDCT lung screening and unhealthy behaviours among those customers.

Methods:

We established a prospective observational study at a community hospital in Taiwan. In total, 1326 customers of the commercial LDCT lung screening without lung cancer history were recruited. At the day of screening, interviewers collected their baseline demographic information and smoking/drinking habits. Only 605 participants completed two follow-up surveys at the 3rd and 12th month. Screening findings were defined as 'normal' if there were no nodules or only definitely benign nodules and as 'abnormal' if any lung nodule or ground-glass opacity were found. We applied the generalised linear mixed model to estimate the effects of time and screening findings on daily smoking and weekly drinking.

Results:

The rates of daily smoking (weekly drinking) decreased from 13.1% (15.5%), to 10.9% (12.9%) in the 3rd month, and 7.9% (12.4%) in the 12th month. The associations between abnormal screening findings and smoking (-0.25, 95% CI: -0.77,0.28) or drinking (0.13, 95% CI: -0.29, 0.56) cessation are not significant. The time effect on smoking cessation was persistent (-0.23 and -0.62 at the two periods, 95% CI: -0.39, -0.07 and -0.85. -.038), and the effect on stopping drinking was relatively small (-0.23 and -0.28 at the two periods, 95% CI: -0.43, -0.04 and -0.52, -0.04).

Conclusions Commercial LDCT screening would decrease the rates of smoking more than drinking among these consumers, and the abnormal finding was not further associated with cessations. It implies that commercial screenings may be beneficial for decreasing unhealthy behaviours as a teachable occasion.

Key messages:

- Commercial LDCT lung screening program may have benefits for decreasing smoking and even drinking behaviours among the non-specific high-risk population.
- It might be a good moment for health providers and practitioners to conduct cancer-related health education during commercial screening programs.

The Villeneuve renovation program Health Impact Assessment

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We conducted a health impact assessment (HIA) on a french urban renovation program in a disadvantaged neighborhood: the Villeneuve, symbol of the architecture of the great ensembles of the 1970s. The ambitions of this new program are opening to the city, simplification of traffic, requalification of the housing stock, creation of living spaces renovation of public facilities enhancement green spaces ... so many challenges to be met for the attractiveness of the territory and its inscription in the heart of the Metropole. The HIA was conducted collaboratively with the services of the city of Grenoble, Echirolles, and the Metropole.

The information used to inform the assessment included profiling the community of the Villeneuve, a comprehensive literature review focussing and semi-structured interviews. Many components of the project were evaluated: access to good quality of green and public spaces; urban design; mobility; access to shops and services and social cohesion.

The HIA shows that the urban renovation program is likely to have a mix of negative and positive impacts on health, mental health, wellbeing and social cohesion. In particular on the living environment, the attractiveness, the perception of the neighborhood, on physical security and sense of security, opening of neighborhoods, mix functionality, opportunity for leisure and sports practices. In addition the program provides an opportunity to specifically target reducing health inequalities in the area.

The HIA working group has co-built 47 recommendations. These recommendations were than hierarchized according to four criteria: political portability - cost- technical feasibility - temporality.

This HIA is a structured approach that allowed the renovation program to be observed with a holistic vision of health around the determinants of health and encouraged partnerships and anticipate health issues as early as possible in the decision-making process of urban programs.

Key messages:

- The HIA is a structured approach that allows urban projects to be observed with a holistic vision of health around the determinants of health.
- The HIA encourage partnerships and anticipate health issues as early as possible in the decision-making process of urban programs.

Breast Cancer Screening (BCS) by Mammography Tomosynthesis

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Issue:

Breast cancer is the 2nd cause of death for women in Portugal and 6000 new cases are detected annually. The prognosis is better for women whose cancers are detected earlier.

Description:

Algarve BCS begin in 2005 using a digital mammography with 2 incidences/breast with double reading and consensus by a 3rd radiologist. Each 2 years women age 50 to 69, are invited to a Mobile Unit to do the mammography, a partnership with Algarve Oncologic Association. In 2017, direct digital mammography with Tomosynthesis(DDMT)was implemented. This technique increase cancer detection, reduction of false positives, false negatives and radiation dose. Diagnostic accuracy is better and also improves accessibility to the most vulnerable population groups to this technology.

Results:

BCS covers 100% of the region and the mobile unit is user friendly for women with mobility impairment. Adhesion rate is > 62%. Is the 1st screening using Tomosynthesis in Portugal.Preliminary results show that the confirmation rate increased (10 %), the detection rate per 1.000 women also increased and the positive predictive value >95%.

Costs associated with the program decrease and less number of women called for false positives is observed. The number of positive mammograms increased, due to diagnostic acuity, with better visualization of the breast, namely in the patterns of greater mammary density; which leads to an improvement in further assessment rates.

Lessons:

The technique increases the adhesion rate, with the same human resources. The decrease of the false positives improves the number of women send to further assessment and Senology Center. Earlier diagnoses, less aggressive treatments, and a higher survival rate are also expected.

Messages- Using this technology is expected that cancer diagnosis will be earlier, more reliable and wiht higher survival rate for this disease. The possibility of a population based screening with DDMT is an opportunity to reduce inequalities in the region.

Key messages:

- Mammography Tomosynthesis is expected that cancer diagnosis will be earlier, more reliable and wiht higher survival rate for this disease.
- The possibility of a population based screening with Mammography Tomosynthesis is an opportunity to reduce inequalities in the region.

Evaluation of the Health impact assessment (HIA) deployment process in a French region

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Background:

Health impact assessment is a method aimed at identifying the potential health impacts of policies and projects before their implementation and suggesting proposals in order to mitigate negative impacts and enhance positive ones. HIA is growing in France mainly at the local level. The Pays de la Loire Regional Health Agency (PDL-HRA) took an early interest in HIA and supported three experiments proposed by the town councils. An assessment was performed to judge its added value, identify success factors and draw lessons for the development of the practice.

Methods:

An evaluation framework was built based on standards and literature. Using a qualitative multiple case study design, a cross-sectional analysis of the HIAs was carried out in order to compare the implementation process in their respective contexts, the governance arrangements and the changes introduced as a result of the HIA. Evaluation draws upon HIA reports, workshops, field observation and 40 interviews that were analysed with NVivo.

Results:

While the conduct of HIAs is generally in line with standards of practice, the analysis of the relevance of HIA and impact characterization remain insufficiently documented. Implementation and success factors depend on the political context, the culture of institutions, actors and the purpose of HIA. Recommendations have been taken into account and changes are emerging. The stakeholders indicate their interest in HIA insofar as it is a meeting point between the concerns of institutions regarding health equity and democracy and it provides tools for action.

Conclusions:

Although the approach is unanimously valued, it faces time, resource and competition with other activities. The continuation of the approach depends on the HRA policy specifying the aims, resources, fields of application and positioning with regard to the partners.These findings are consistent with other French work and literature data. French experience coulfd benefit from that of other countries.

Key messages:

- Skills of professionals have to be reinforced in order to make appropriate and quality HIAs.
- Evaluation is useful for understanding the development of an emerging practice and for supporting a decision-making in terms of scaling up, integration, role assigned to the health sector.

Different designs of additional payments for new technologies: The approach of Germany and the USA

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Background:

Health systems have to balance access to technologies, ensure safety and quality, and manage expenditures. As payment rates of prospective payments do not reflect higher costs of technologies, additional payments were implemented. The study aims at comparing the principles of Medicare's New Technology Add-on Payments (NTAP) and payments for new diagnostic and treatments methods in Germany (NUB), and analyzing the development of additional payments over time.

Methods:

A literature review was conducted using public domains of regulatory bodies and databases to compare payment approaches according to a) technologies' eligibility criteria, b) their designs, c) implemented reforms, and d) conducted evaluations. Published data of responsible institutions was used to descriptively analyze the number of technologies authorized for additional payments in hospitals (2005-2018).

Results:

Major differences between payment approaches were identified. The design differs regarding application and payment processes. While in Germany, a single hospital wishing to use the technology has to request for authorization, in the US the manufacturer starts the application process. The NUB-approach allows for payment negotiations per technology between insurers and a certain hospital, the amount of NTAP-payments is calculated per case using a calculation scheme based on real hospital costs. Hospitals, thus, may only be partially compensated for the higher costs of technologies. Only limited evidence exists on the effects of these payments.

Conclusions:

Both approaches improve access to technologies compared to prospective payments. However, different designs indicate different incentive structures, which can affect patient's access. Implicitly, both designs seem to limit excessive technology utilization. Further studies are necessary to evaluate the impact of additional payments on real utilization rates, outcomes and expenditures in order to optimize the design of those payments.

Key messages:

- Additional payments can improve access to technologies compared to prospective payments, but seem to limit excessive technology utilization at the same time.
- Different designs come along with different incentive structures to use technologies. Further empirical research is needed to analyze effects on real utilization rates, outcomes and expenditures.

Quantitative Health Impact Assessment Methodology for Societal Initiatives: A Scoping Review

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Background:

Promoting health rather than treating disease is gaining popularity and promotion initiatives are increasingly situated in the societal domain. In this scoping review, the literature on quantitative health impact assessment (HIA) practice and methodology is explored in order to provide an overview of methods that have been used or proposed for estimating societal initiatives' health outcomes.

Methods:

Systematic searches were done in PubMed and Web of Science in order to identify relevant literature. A set of selection criteria ensured that studies held useful quantitative HIA methodology and a societal approach. Reference lists of all selected studies were then examined for other studies. After literature selection, quantifiable features of interest were recorded and general observations on the composition of the current literature were made.

Results:

The literature selection process yielded 54 included studies, most of which focus on lifestyle-related determinants. Of different health outcome measurements, deaths (averted) was most frequently used, followed by life years and quality- and disability-adjusted life years. Equity is frequently mentioned, but not often estimated. Most studies made estimates based on simulation models, notably with Monte Carlo, Markov and system dynamics models (simulation period mean 46 years; median 50 years). Inputs for the models such as relative risks, transition probabilities and price elasticities were taken from census and register data, survey data, evidence from previous (scientific) studies and outcomes from stakeholder sessions.

Conclusions:

HIA holds a wide range of practices with some overlap. Different methods' strengths and weaknesses partly depend on the phenomenon of interest. Some policy types have standard approaches, but there is no one universal optimal method and therefore having a grasp of multiple methods is useful. Furthermore, estimating health effect distributions could make an important addition to HIA.

Key messages:

- Quantitative HIA can be conducted using various methodological bases and most studies use some form of simulation modelling. Different simulation methods are distinct, but do show some overlap.
- Quantitative HIA topics often relate to individual behaviour (micro-level proximal determinants). There is room for HIA method development for determinants with indirect connections to the individual.

Hospital contextual factors affecting the use of health technologies: a systematic review

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Background:

Healthcare systems are facing great challenges due to increased share of aging population, growing health needs and economic restraints. To keep a high quality of assistance it is important to invest in health technologies (HTs) that have the potential of improving health outcomes. Even though a lot of guidance does exist on how HTs should be introduced, used and dismissed, there is a surprising gap in literature concerning the awareness of hospitals in the actual utilization of HTs, namely utilization in daily practice after formal adoption.

Methods:

We performed a systematic literature review of qualitative and quantitative studies aimed at investigating hospital contextual factors that influence the actual utilization of HTs at hospital level. PubMed, Scopus, Web of Science, Econlit and Ovid were searched to retrieve studies published in English from 1st January 2010 to 31st May 2018.

Results:

A total of 33 studies were included mostly addressing information and communication technologies (ICTs). Findings suggest that contextual factors that impact on actual utilization of HTs at hospital level are ascribable to four main families: financial factors, leadership styles, human resource management and hospital infrastructure. It emerges also that involving professionals at all levels and planning people's work and competencies are major determinants of HTs actual utilization.

Conclusions:

The evidence suggests that several contextual factors play a major role in HTs actual utilization at hospital level even though data are mostly referred to ICTs being the other HTs unexplored. Indeed, findings from this study suggest that numerous items should be evaluated when considering to use a new HTs at hospital level. Nevertheless, evidence regarding actual utilization of medical and surgical HTs is still lacking and future research is needed.

Key messages:

- Financial factors, leadership styles, human resource management, hospital infrastructure are relevant determinants of actual utilization of new HTs at hospital level.
- The evidence on contextual factors that influence actual utilization of HTs is mostly referred to ICTs and further research is indeed deserved.

DK Health at work, Social security

Usefulness of the results of a surveillance program for uncompensated work-related diseases in France

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Background:

French employees receive compensations for diseases officially recognized as professionnal disease. Reimbursment data are thus used to produce statistics. Such data do not integrate uncompensated work-related diseases (UUWRD) defined as likely to be of occupational origin but not recognized as well. In 2003, the National Public Health Agency implemented a surveillance program on UWRD. This program is a complement to the compensation system for occupational diseases.

This communication presents results UWRD program can provide.

Methods:

Twice a year, a network of volunteer occupational physicians (OP) reports ill health and associated work exposures of employees. Employee sociodemographics are notified. In 2018, half of French regions are integrated in the program.

Prevalence rates are calculated for UWRD. Chi-squared tests are used to compare prevalence rates between groups. Multivariate logistic regressions are conducted to evaluate:1- risks to report UWRD between groups, 2- prevalence rates trends. Underreporting rates of UWRD are approximated using an indicator capturing differences between figures produced by UWRD program and the compensation system.

Results:

Over the 2009-2014 period, women working in mass food retail were observed at higher risk to present musuculoskeletical disorders than women of other sectors (ORa = 2.0). Same results were noted for men (ORa = 1.3). In mass food retail, decreases in musculoskeletal disorder prevalence rates were reported. Estimated average annual change rates were of 7.0 % for women and 11.0% for men. In 2011, UWRD data highlighted that between half and three-quarter of work-related musculoskeletal disorders were unreported by the compensation system.

Conclusions:

UWRD data are used to identify vulnerable groups, analyse temporal trends and evaluate underreporting of professionnal disease.

Key messages:

- URWD program is a complement to the compensation system and let to better monitor health status of communities.
- Such informations are of interest to guide prevention policies.

Emotional demands at work and risk of depressive disorder: A nationwide Danish cohort study

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Background:

Studies suggest that high emotional demands at work are associated with increased risk of depression. However, most previous studies have measured emotional demands using self-report and estimates may be inflated due to reporting bias. Furthermore, no study has yet accounted for the potential selection of individuals with increased risk of depressive disorder into occupations with high emotional demands.

Methods:

We analyzed data from two separate nationwide register-based Danish cohorts, The Danish Work Life Course Cohort (n = 955,712; person-years = 6.99 mill.), and the JEMPAD study (n = 1,680,214; person-years = 21.73 mill.). We measured emotional demands annually by job exposure matrices, and depressive disorder using registers on psychiatric hospital treatment. Emotional demands were categorized as quartiles. To account for selection into jobs with high emotional demands, we adjusted for numerous confounders, including health services use before workforce entry, parental socioeconomic position, and psychiatric and somatic diagnoses. The present abstract reports preliminary results based on a subset of the study population used as a development sample (n = 16,163, person-years = 168,889). Final results will be available for the conference.

Results:

Preliminary findings showed a tendency towards an increased risk of depressive disorder for employees in occupations with the highest level of emotional demands (hazard ratio: 1.20 (95% CI: 0.85-1.69). The association was similar with and without adjustment for confounders and was not explained by selection into occupations with high emotional demands.

Conclusions:

If confirmed in analyses of the full study population, our results suggest that high emotional demands at work may be associated with increased risk of depressive disorder, and that this association is explained by neither reporting bias nor a selection of individuals vulnerable to depression into occupations with high emotional demands.

Key messages:

- Emotional demands may be associated with an increased risk of depressive disorder.
- Further research is needed to explore the potential for workplace prevention of high emotional demands.

Cardiovascular and respiratory diseases and neoplasms in seafarers and farmers in Denmark

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Background:

Seafaring is a very specific occupational environment and seafarers are exposed to many health risks. On the other hand, regular medical examinations are obligatory to get permission for working onboard. We sought to estimate relative risk of hospital contacts due to neoplasms, cardiovascular and respiratory diseases among seafarers compared to farmers, as a relevant land-based trade.

Methods:

The participants were all seafarers and all farmers aged 18-65 year at the baseline and residing in Denmark. Two cohorts with baselines in 2002 (n = 56,216) and 2012 (n = 42,000) were linked to records from Danish health registers. We calculated the hazard ratios of hospital contacts using Cox regression models separately for men and women.

Results:

In all disease categories, the risk for hospital contact was greater among male seafarers compared with male farmers. The adjusted hazard ratios (HR) for the 2012 cohort for neoplasms, cardiovascular and respiratory diseases were 1.36 (95% CI: 1.17 to 1.58), 1.16 (1.01 to 1.32), and 1.51 (1.28 to 1.78), respectively. Among female seafarers, the HR for the 2012 cohort for respiratory diseases was 1.58 (1.18 to 2.10), but for cardiovascular diseases 0.73 (0.54 to 0.99). Differences for neoplasms were marginal among women. The incident rates and differences decreased in cardiovascular diseases and increased in neoplasms and respiratory diseases, particularly in men.

Conclusions:These data suggest that seafaring is associated, compared with farmers, with a substantially increased risk of neoplasms, cardiovascular and respiratory diseases among men.

Key messages:

- Seafaring is associated, compared with farmers, with a substantially increased risk of neoplasms, cardiovascular and respiratory diseases among men.
- The incidence rates were highest for CVD in men and for neoplasms in women.

Social validity for work ability assessments and official decisions – clients' experiences

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Background:

Professionals need to be able to express what is at stake during the decision-making process and the discrepancy between formal rules and practical rationality need to be bridgeable and transparent for outsiders. Investigations of social validity for work ability assessments are rare. However, the concept can provide valuable information upon the acceptability and comprehensibility of procedures and how professionals can increase clients' participation.

The purpose of this study was to investigate social validity for work ability evaluations within the sickness insurance system and the official decisions they lead to.

Methods:

This was a longitudinal qualitative study using telephone interviews and files from the Swedish Social Insurance Agency. Clients (n = 30) were interviewed after their participation in a work ability evaluation as well as after receiving an official decision upon eligibility for sickness benefits. Data was analyzed using a deductive content analysis.

Results:

Preliminary findings show that clients' comprehensibility of the different tests and their composition were depending on whether the specific tests were perceived as clearly related to the clients' difficulties and what information they had received. In order to receive a fair description of the client's work ability, clients state that the work ability evaluation needs to be individually adapted and that the standardized structure is not relevant for all. What is acceptable and fair to one client could be unacceptable to another, depending on what arguments and information case-managers and evaluation professionals provided.

Conclusions:

Authorities need to express and motivate the reasons for a diverse range of steps during clients sick-leave process, not only regarding official decisions. Social validity for work ability evaluations is depending on the provided information and the applicability to the clients' situation.

Key messages:

- Social validity is depending on the provided information and the applicability to the clients' situation.
- Authorities need to communicate clearly with clients through the whole sick-leave process.

Longitudinal analysis of work-family conflict and self-rated health among working parents in Germany

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In the wake of a rising labor market participation of women and changing and family arrangements, parents are increasingly faced with the challenge of reconciling work and family life, which can lead to work-family conflicts (WFC). The present study examined the longitudinal effect of WFC on self-rated health among working parents in Germany.

The data was drawn from wave 6 (2013) and wave 8 (2015) of the pairfam family and relationship panel. It included working persons living together with at least one child (662 mothers and 529 fathers). Pairfam is a random sample of about 12,000 persons drawn from German habitants in private households. Data was collected via computer-assisted personal interviews with yearly follow-ups. The drop-out rate of the panel from wave 1 to wave 8 is 62%. Self-rated health was measured as a single item with five response options. Using logistic regressions, we estimated the longitudinal effects of the effect of WFC in wave 8 on self-rated health. Moderating effects of education and household income were considered. The analyses were adjusted for self-rated health in wave 6.

The odds ratio for poor self-rated health for mothers who developed WFC in wave 8 compared to mothers who did not report a conflict in both waves was 2.6 (95% CI: 1.47-2.41). For fathers with newly emerged WFC in wave 8, the odds ratio was 2.1 (95% CI: 1.08-3.80). Interaction of WFC with education and household income showed a weak non-significant effect on the self-rated health of mothers and fathers. The health of parents who reported a conflict in wave 6 but not in wave 8 was on a similar level as the health of parents with no conflict in both waves.

The results point out that WFC can lead to a decline of self-rated health. Further investigations should be carried out to determine groups who are particularly affected by health-related outcomes of WFC. It also remains to be discussed how self-rated health can be improved e.g. through reconciliation policies.

Key messages:

- Work-family conflict leads to a poorer self-rated health of working parents in Germany.
- The health of working parents with lower education and income is affected more severely by work-family conflict compared to parents with higher education and income.

Work-related diseases in temporary workers in France between 2009 and 2014

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Background:

The percentage of temporary workers in the workforce has increased in many European countries. The working environments of temporary workers are often characterized by job insecurity and exposure to hazardous working conditions. Studies have investigated the health status of this population but few of them have specifically investigated work-related diseases. The aim of this study is to compare the risk of uncompensated work-related diseases (UWRD) in temporary workers with permanent contract workers in France between 2009 and 2014.

Methods:

UWRD and suspected associated exposure factors were notified by occupational physicians involved in French UWRD surveillance programme. Sociodemographic and professional characteristics were recorded for all salaried workers consulted by occupational physicians. We analysed musculoskeletal (MSD) disorders (elbow, hand/wrist, shoulder, back) and mental health disorders (MHD) according the type of consultation (periodic check-up, hiring...) using logistic regression. The distributions of notified exposure factors for MSD and MHD were compared between temporary and permanent workers.

Results:

Of the 433 148 salaried workers consulted as part of the surveillance programme, 5.3% and 80.2% had temporary and permanent contracts, respectively. Temporary workers were as likely to have work-related shoulder, elbow and hand/wrist MSD as permanent workers. The former had a lower risk of MHD irrespective of the type of consultation ([OR] = 0.4, 95 % CI 0.3-0.5) and a lower risk of back MSD during on-demand/return-to-work consultations ([OR] = 0.2, 95% CI 0.1-0.5) and during periodic check-ups ([OR] = 0.3, 95% CI 0.2-0.7).

Conclusions:

Temporary workers were not at a higher risk of UWRD (MSD and MHD) than permanent workers. This suggests that the generally poor health status found in temporary workers in previous studies may be linked more to their general health status and perceived job insecurity than to poorer working conditions.

Key messages:

- In our study, the risk of work related musculoskeletal disorders and mental health disorders in temporary workers was no greater than that in permanent workers.
- Poor general health known in temporary workers, may be linked more to their general health status, job insecurity and decreasing career trajectory than to poorer working conditions.

High mortality in manual occupations and the role of alcohol in 2001-2015 in Finland

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Background:

High mortality is concentrated in low socioeconomic positions which may largely be explained by excessive use of alcohol. The aim was to identify specific manual occupations with high mortality and to examine whether there are differences in the role of alcohol in explaining the excess mortality among manual occupations with high all-cause mortality.

Methods:

A register-based study of employees aged 30-64, followed for mortality 2001-2015. Age standardized mortality ratios (SMR) were calculated to compare the mortality rates of manual occupations. The contribution of alcohol related mortality to excess mortality was obtained by comparing the excess mortality in all deaths and deaths not related to alcohol.

Results:

Men had 31 and women 11 manual occupations with SMR statistically significantly over 120 compared to all employees. Mortality rates were highest among building construction labourers (SMR 180, 95% CI 163-199) among men and building caretakers (SMR 155, 95% CI 135-179) among women. With few exceptions, high mortality was a combination of high alcohol-related and high non-alcohol-related mortality. Among men, the contribution of alcohol-related mortality to the excess all-cause mortality compared to all employees was over 10% in half of the high mortality occupations. Among women excluding the alcohol-related deaths had a minor effect on all-cause mortality.

Conclusions:

Diminishing the alcohol-related mortality would level excess mortality of high mortality manual occupations but not eliminate it. Targeting the improvement of working conditions and occupational health care to certain occupations would diminish the mortality differences between occupations and social classes.

Key messages:

- To prevent the high mortality of manual occupations, improvements should be targeted to several different aspects of working conditions.
- Occupational health care of manual occupations with high mortality should be improved and provide with early interventions towards risky alcohol behaviour.

Effects of sickness absence on disability pension risk: Finnish register study of two native groups

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Background:

Sickness absence and disability pension have a close connection and both describe the health of working-aged populations. The aim of this paper was to study if Swedish and Finnish speakers differ in the risk of disability pension after first-time sickness absence. This may reveal new aspects how to support health and work ability promotion activities.

Methods:

The longitudinal register data used come from Statistics Finland. They consist of random samples of 5 % of all Finnish speakers and 20 % of all Swedish speakers, observed throughout the period 1989-2010. The analyses concerned non-retired individuals aged 16-60 years who were under risk of first-time sickness absence that extended 10 days. Discrete-time hazard models were estimated to both language groups to evaluate how first-time sickness absence, time since absence, length of absence, and various socio-economic control variables affected the disability pension risk.

Results:

The disability pension risk was extremely high immediately after the sickness absence receipt and remained elevated thereafter approximately 20 times higher as compared to non-recipients. A strong interrelation between first-time sickness absence and the risk of subsequent disability pension was found for both language groups and the risk was persistent in the very long term. The risk pattern looked similar to both Swedish and Finnish speakers and we did not observe any differences between women and men.

Conclusions:

Paid sickness absence is illustrative of strong health selection and a notable risk for reduced work ability even in the more distant future. The currently implemented policies in Finland, which require statements about rehabilitation plans soon after individuals have entered a sickness spell, can be considered beneficial for both the individual and society. Comparison of the language groups shows that the disability pension process after sickness absence is operating similarly to both groups.

Key messages:

- Sickness absence requiring medical certificate is an indicator of possible long-term work disability.
- Timing of rehabilitation process during the sickness absence is critical.

Individual- and company level determinants of vocational rehabilitation: a multilevel study

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Backround:

Vocational rehabilitation (VR) is considered an important means to combat work ability problems and enable people to continue working despite health problems. We examined the magnitude of company level variation in VR and determined which individual- and company level characteristics are associated with access to VR due to mental disorders, musculoskeletal diseases, and other somatic diseases.

Methods:

A 30% random sample of all Finnish private sector companies with more than 10 employees aged 25-62 years at the end of 2010 (5.567 companies with 300.601 employees) was followed up for incident VR for six years. Company size and industry, as well as gender, age, education, social class and sickness absence measured both at the individual- and company level, were used as explanatory variables in multilevel logit models.

Results:

After controlling for the individual level covariates, companies accounted for 12% of the variance in VR. The proportion was largest in VR due to musculoskeletal diseases. VR was more common among women, older employees (except the very oldest age group), those with low education (particularly due to musculoskeletal diseases), low social class, and previous sickness absence. VR was more common in larger companies, and in construction and in health and social work, and less common in professional activities. VR was more common in companies with low proportion of highly educated employees and with higher sickness absence rates.

Conclusions:

Company level variation in VR was substantial after controlling for individual level characteristics of the employees. The employer may have an important role in the prevention of work disability through vocational rehabilitation.

Key messages:

- Company level variation in vocational rehabilitation was substantial after controlling for individual level characteristics of the employees.
- The employer may have an important in the prevention of work disability through vocational rehabilitation.

Physicians' use of information from sickness certification guidelines: A nationwide Swedish survey

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Background:

Sickness certification guidelines, introduced in Sweden 2007, are to support physician's work with sickness certification of patients. Our aim was to explore the clinical importance of the guidelines, by studying what kind of information from guidelines the physicians use, and if this differ between type of clinics.

Methods:

Data from a questionnaire sent to all 34 718 physicians in Sweden in 2017 were used (54% response rate). The study is based on answers from the 13 750 physicians who had sick-leave consultations.

Results:

Half of the respondents used the guidelines at least once a month, and this was most common in primary healthcare (72%), occupational health services (64%) and psychiatry (61%). The type of information used differed; 53% used recommendations about suggested sick-leave duration and 29% about degree (full- or part-time) of sickness absence. Using information about function respectively work capacity was more common within psychiatry (42 and 42%), primary healthcare (37 and 38%) and occupational health services (35 and 41%) and less common among physicians in surgery and orthopaedic clinics (12 and 12%) who more often used information about duration (48 and 53%). In total, 74% reported that the guidelines to some extent were problematic to apply while 29% reported that they improved the quality of how they handled sickness certification tasks. Half (47%) experienced that the guidelines facilitated their contacts with patients.

Conclusions:

The use of sickness certification guidelines varied between type of clinic and a majority experienced to some extent that the guidelines were problematic to apply. Further studies are needed to assess what information physicians in different settings need and what developments of the guidelines that are warranted.

Key messages:

- Half of the physicians used the sickness certification guidelines every month, but the type of information used varied with type of clinical setting.
- As many as half of the physicians stated that the sickness certification guidelines facilitated their contacts with patients, but a majority found them somewhat problematic to apply.

Determinants of managerial preventive actions in relation to common mental disorders at work

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Background:

Managers may prevent Common Mental Disorders (CMDs) among their subordinates due to their authority to influence the work environment. Yet, their perspective has received only limited attention in research. This study aims to increase managers' capacity to contribute to the prevention of CMDs by exploring the determinants of two managerial preventive actions: 'reviewing assignments and the work situation' (MPA-review) and 'taking initiative to talk about depression and anxiety at work' (MPA-talk).

Methods:

An online survey was sent to 4,737 Swedish managers, aged 20-65 years (71% participated, n = 3,358) in 2017, of which 2,921 were included as they answered the MPA-items. Ten possible determinants of MPAs, comprising person-, work-, and competence-related characteristics of managers were related to performing MPAs (yes or no). Bivariate and multivariate binary logistic regression was performed to test associations (OR with 95% CI) between each determinant and MPAs. We have adjusted for experience-related characteristics of managers and company size.

Results:

50% of managers initiated MPA-review and 57% MPA-talk. Managers had a higher odds to initiate respectively MPA-review and MPA-talk when being female (OR 1.42, 95% CI 1.17-1.73; OR 1.33, 95% CI 1.08-1.64), working in organizations offering lectures on CMDs (OR 1.36, 95% CI 1.01-1.83; OR 1.84, 95% CI 1.30-2.60) or stress counselling (OR 1.79, 95% 1.46-2.20; OR 1.53, 95% CI 1.22-1.91), having responsibility for the work environment (OR 1.42, 95% CI 1.15-1.74; OR 1.44, 95% CI 1.16-1.79), or having had received training on CMDs (OR 1.56, 95% CI 1.27-1.93; OR 1.61, 95% CI 1.28-2.03).

Conclusions:

Managers report taking more actions to prevent CMDs in their workforce when they are female, have received training on CMDs or work in organisations where CMD preventive measures have been implemented.

Key messages:

- Organizations could invest in company-wide preventive measures and training to enable MPAs.
- Managerial education should include information on CMDs in order to improve managers' preventive capacity.

Gender differences in managers' attitudes toward depressed employees: a cross-sectional study

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Background:

Depression is known to carry negative attitudes within society and organisations. In the workplace, managers are responsible for the psycho-social work environment and attitudes to depression will likely affect that environment. The few studies performed among managers have found that female, more educated and managers working in the public sector were less likely to report negative attitudes. However, these studies did not take organization characteristics into account. The aim was to investigate the association between gender and negative attitudes toward employees with depression controlling for individual and organisational factors.

Methods:

A cross-sectional web-survey was sent to 4737 Swedish managers, aged 20-65 years in 2017, response rate 71%; We included those answering the "Managerial stigma toward employee depression" instrument, n = 2663 (901 women, 1762 men), consisting of 12 items tapping negative attitudes towards depression. The 3rd quartile was used as a cut-off. Multivariate logistic regression analyses on attitudes towards depression were performed (95% CI) to generate odds ratios (OR) adjusted for co-variates (individual and organisational characteristics).

Results:

Male managers were more likely to report negative attitudes compared to female managers (OR 1.64, 95% CI 1.28 - 2.10) irrelevant of individual (age, education, current workplace management experience, lifetime experience in management, managerial position) or organisational (work sector, staff gender composition, presence of staff members with Common Mental Disorders) characteristics.

Conclusions:

A gender difference in reporting negative attitudes was appraised regardless any of the co-variates included. To manage depression within the workplace, companies should also address managers' attitudes towards depression.

Key messages:

- Important to heed managers' attitudes to CMDs and their impact on RTW processes.
- Gender-tailored approach in managers' training is suggested for awareness and knowledge on mental health.

Occupational diseases in self-employed workers in France

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Background:

In France, self- employed workers receive disability benefits, but are outside of the specific legislation protecting employees from occupational accident and diseases. Physicians are generally not aware of this shortcoming and ask for occupational diseases benefits, as they do for salaried employees. The health fund of independent workers (HFIW), dismiss the application, which is uphold by law, but can be a threat to the patient, if it shutters hope for other available benefits. Our aim was to see if the request for occupational diseases was related to significant disability in self-employed workers, and if such a disability could be handled by available benefits from HFIW. This survey could be instructive for countries without occupational diseases frame for self-employed workers.

Methods:

A prospective study was conducted on self-employed claimants applying for occupational disease, from June 2015 to September 2017, with an 18 month period follow-up, in the Ile- de- France region. A questionnaire was sent to the claimant and the data were completed through a phone call or appointment. The main outcome was the number of claimants qualifying for disability benefit available at the HFIW.

Results:

148 claimants were identified and 141 (95%) matched with the occupational diseases legal setting. The causative agents were close to those observed in employed workers: musculoskeletal, asbestosis. Disability allowance, complete or partial, could be provided by the HFIW because his criteria were met in 38 claimants(27%);benefits for asbestosis exposure were possible through a specialized body in 16 claimants(11%).

Conclusions:

The occupational disease request from self-employed workers matched with medical conditions granted by the HFIW, or external social bodies. This screening should be routinely implemented by nurses or any insurance officer.

Key messages:

- Self-employed workers are outside of the specific legislation protecting employees from occupational accident and diseases but 27% of them may apply for other disability benefits.
- The occupational disease request from self-employed workers dismiss an application but match with available disability benefits from the Independent health fund and should be routinely screened.

Manager perspectives on workers' return to work after cancer treatment

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Background:

Due to improved cancer treatment, the survival rate of cancer is increasing Unfortunately, many cancer survivors suffer from serious late effects because of this treatment. Therefore, more and more cancer survivors with reduced work ability are, and will in the future be, in work. To include this group of workers in working life is a challenge for the society in general and for the enterprises in particular. The aim of this study was to investigate managers' experiences regarding cancer survivors' return to work (RTW).

Methods:

We performed qualitative individual in-depth interviews with nine managers who had experience with workers who needed adaptations at work after cancer treatment. The interviews were transcribed in verbatim and thematically analyzed in accordance with guidelines for stepwise deductive-inductive analysis (Tjora, 2016).

Results:

All managers emphasized the importance of taking good care of workers with serious diseases and to adapt work according to their work ability. The managers tried to follow the Work Environment Act and guidelines given by the Norwegian Labor and Welfare Administration but they experienced that the guidelines did not fit well with the needs of the cancer survivor and/or the enterprise. A good RTW process was dependent on an open dialog that was initiated early in the RTW trajectory to establish a sense of safe situation for both the cancer survivor and the company. A good RTW process could only be established if the colleagues of the survivor gave their support to both the survivor and the manager. In addition, it was of great importance that the needs of the cancer survivor had to be balanced by the production needs of the enterprise.

Conclusions:

Managers need support from health personnel and social security agencies to support cancer survivors to retain work.

Key messages:

- Cancer survivors need adaptations at work.
- Managers are crucial in securing a successful vocational rehabilitation of cancer survivors.

Topic modeling to mind illegal compensation for occupational injuries

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Background:

Accurate reports of occupational injuries are important to monitor workplace safety and health initiatives. In South Korea, media reports, experts, and workers have been constantly raising the issue of underreporting. Supposedly it is because employers have strong market "incentives" by underreporting their employees' injuries. A critical way to underreport or cover-up is illegal compensation (in Korean called "gong-sang"). Unfortunately, "gong-sang" is not counted as official occupational injury statistics. The aim of this study was to analyze the social media data using topic modeling and to explore issues surrounding "gong-sang".

Methods:

We used web scraping technology and collected 2,210 social media data from Web search engines. Data was processed to transform unstructured textual documents into structured data using the Python and applied Latent Dirichlet allocation (LDA) in the Python library, Gensim, for topic modeling.

Results:

Based on the LDA method from ''gong-sang''- related documentation, 10 topics were identified. Topic 1 was the greatest concern (60.5%), with keywords implying the choice between illegal compensation (''gong-sang'') and legal insurance claims. The next concern was Topic 2 including keywords associated with claims for industrial accident insurance benefits. The rest topics (topic 3-10) showed the monetary issue, precarious employment, and vulnerable body parts to ''gong-sang''.

Conclusions:

We explored web-based data and identified the salient issues surrounding ''gong-sang''. LDA topics may be helpful to ensure efficient occupational health and safety scheme to protect vulnerable employees from ''gong-sang'' practices.

Key messages:

- The topics formulated by LDA included queries about legal insurance claims.
- Legal insurance claims including private or social insurance, monetary compensation, injured body parts, and the type of jobs vulnerable to ''gong-sang''.

Work capacity assessments – reviewing the what and how of physicians' clinical practice

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Background:

Although a main task in the sickness certification process, physicians' clinical practice when assessing work capacity has not been thoroughly described. Increased knowledge on the matter is needed to support a better and more reliable certification process. In this review, we aimed to synthesise existing evidence to provide a clearer description of the work capacity assessment as practiced by physicians.

Methods:

Seven electronic databases were searched systematically for qualitative studies examining what and how physicians do when they assess work capacity. Data was analysed and synthesised using qualitative manifest content analysis.

Results:

Twelve articles were included in the review. Results show that physicians seek to form a knowledge base including understanding the condition, the patient and the patient's workplace. They consider both medical and non-medical aspects to affect work capacity. Accordingly, to acquire and process the information they use both medical and non-medical skills, methods and resources. Medical competence is an important basis, but not enough. Time, trust, intuition and reasoning are also used to assess the patient's claims and to translate the findings into a final decision. The depth and focus of the information seeking and processing vary depending on several factors.

Conclusions:

The work capacity assessment is a complex task where physicians rely on their non-medical skills to a higher degree than in ordinary clinical work. These skills are highly relevant but need to be complemented with methods to better understand the patient's work place, as well as theoretical knowledge regarding the intricate associations between health, work and social security. This would further enhance physicians' competence and confidence, and promote better experiences and practices of the work capacity assessment.

Key messages:

- In the complex task of assessing work capacity physicians rely on their non-medical skills to a higher degree than in ordinary clinical work.
- A better understanding of the patient's work situation and the intricate associations between health, work and social security would enhance physicians' competence and promote better assessments.

The effects of skill-based team learning curriculum in workplace violence prevention for nurses

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Background:

Workplace violence, faced by health care workers, is a severe occupational safety and health hazard, and has received global attentions in research and in practice. The aim of this study was to design, implement, and evaluate a skill-based team learning curriculum of violence prevention for clinical nurses.

Methods:

78 clinical nurses were purposively selected including 41 nurses of treatment group, and 37 nurses of control group. Each treatment group received the training curriculum which included three sessions: (1) 50-minutes workplace violence lecture and video to illustrate the various workplace violence situations, (2) 50-minute team group discussion to design effective violence prevention skills for a hospital violence situation, (3) 60-minute interactive skills training curriculum focusing on role play, rehearsal and feedback. The control group only received a self-learning violence prevention manual. Generalized Estimating Equation (GEE) model was used to examine the program effects.

Results:

The results for the GEE statistics indicated a significant time effect. The pretest-posttest and after the posttest results that treatment group showed significant improvement in preventive skills ($\beta = 1.828$, $\beta = 1.330$; $p<0.001$) and self-efficacy($\beta = 4.123$, $\beta = 5.363$; $p<0.001$) compared to the control group. Besides, the experimental group significantly decreased incidents of verbal violence ($\beta = -1.140$, $p < 0.05$) compared to the control group.

Conclusions:

The study showed integration of skill-based teamwork learning in clinical nursing training provides an additional venue to prevent and reduce workplace violence. This shall be a feasible module and significant reference in junior or pre-service health care workers training in the future.

Key messages:

- The study demonstrates the feasibility of implementing the team learning curriculum for clinical nurses.
- The present study provides empirical evidence of the skill-based team learning training curriculum in workplace violence program for clinical nurses.

Psychosocial working conditions and future sick leave and disability pension trajectories in Sweden

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Background:

Psychosocial working conditions such as job demands and job control have been found to be associated with employee health and well-being, but studies on the associations with sickness absence (SA) and disability pension (DP) are scarce. We examined 11-year SA/DP trajectories and the association between psychosocial working conditions and subsequent SA/DP trajectories in the Swedish workforce.

Methods:

Using a prospective cohort study with microdata we explored SA/DP trajectories among female and male employees, respectively, aged 30-53 years in 2001 in Sweden (1,076,042 women; 1,102,721 men). Group-based trajectory analysis was used to model annual mean SA/DP net days trajectories in 2002-2012. Based on a Swedish Job Exposure Matrix (JEM), individuals were assigned an age-, sex- and occupation-specific mean score for demands and control, respectively. Mean scores were categorized into tertiles and categorised into 3x3 combinations of exposure categories. Using multinomial regression we predicted trajectory group memberships for the JEM.

Results:

The highest rate of women were in occupations with low demands and control (24.8%), while the highest rate of men (22.9%) was in occupations with high demands and control. We found three SA/DP trajectories for women (low, medium, high increasing) and two for men (low, high increasing). In fully adjusted models, those in occupations with low demands and low control were at higher risk of belonging to the high increasing SA/DP trajectory compared to those in occupations with high job demands and control in both women (OR 3.86; 95% CI: 3.75-3.97) and men (OR 3.0; 2.99-3.16).

Conclusions:

Low job demands and low job control were associated with more high increasing future SA/DP trajectories compared to high job demands and job control in both women and men.

Key messages:

- In Sweden, women are more often in occupations characterized by low job demands and low job control and men are more often in occupations with high job demands and high job control.
- Occupations with low job demands and low job control were associated with more adverse SA/SP trajectories compared to occupations with high job demands and high job control in both women and men.

Approach for Compensation System of Asbestos-Related Lung Cancer

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Background:

The health hazards of asbestos have been globally recognized, especially those among industrial workers with long-term exposure. Lung cancer is one such asbestos-related disease. It occurs not only among workers but also among residents with environmental exposure to asbestos. Patients with work-related exposure can receive occupational compensation, and patients with non-occupational exposure are supported by a separate compensation system in Japan. However, the latter is not well-known among clinicians, and a substantial number of patients may have been left out. We need an effective way to find patients eligible to receive benefits by better understanding the clinical conditions that characterize patients with asbestos-related lung cancer.

Methods:

We conducted two types of research: 1. Comparison of clinical characteristics between compensation system recipients (N = 65) and general lung cancer patients diagnosed in 2015, using Japan's National Database of Hospital-Based Cancer Registry.

2. Estimation of the frequency of pleural plaques among lung cancer patients by double-checking CT scan images of a random sample of lung cancer patients obtained from the HBCR national database (N = 3585).

Results:

1. Patients with squamous cell carcinoma are twice as likely asbestos-induced as patients with other histology overall after adjusting for age, sex and cancer stages, but not smoking status and history.
2. As many as 20% of the CT images were read inconsistently between two radiologists or respiratory disease doctors and we could not obtain the accurate rate of candidacy for the compensation system.

Conclusions:

We require more accurate information about pathological characteristics by controlling for smoking status and history among compensation recipients. For radiologic interpretation, more effective education is needed for the radiologists and respiratory disease doctors who treat lung cancer patients.

Key messages:

- Specific information about asbestos-related lung cancer would lead clinicians to correctly identify asbestos-related lung cancer.
- Educational system for clinicians would help patients to receive the benefit of compensation.

Predicting occupational exposure to trace metals from welding by non-air monitoring based models

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Mathematical models for estimating occupational exposure to chemicals were developed as a promising alternative to air monitoring that is pricey and sometimes unavailable. Still, models parameters are derived from former air monitoring. Contrarily, our study aims to calculate all parameters independently of monitoring data. We implemented this approach to assess exposure in welding plants. Then, prediction abilities are evaluated by comparison with air measurements.

The Near Field-Far Field (NF-FF) model seeks to give accurate exposure estimation near an emission source. One workplace includes Shielded Metal Arc Welding (SMAW) worker T1 who is in the NF. The other contains induction welding (IW) T2 and packaging workers T3 who are in NF and FF, respectively. The emitted metals are identified from materials compositions. Ventilation rates are calculated by the anemometer technique. Emission rates are calculated using the emission factor method for SMAW and mass balance method for IW, solely based on literature, materials quantities and their compositions. To evaluate the match between measured (6 replicates) and predicted levels, we checked their correlations and tested the mean differences of paired values.

T1 is exposed to Al, Cu, Ni, Cr and Pb, while T2 and T3 are exposed to Al, Cu, Ni, Cr and Zn. A strong correlation was found ($r = 0.78$, $p = 0.008$) for NF predictions and air measurements. The T-test was significant, confirming that NF predictions and measured levels are quite close.

In contrast, our approach did not succeed to predict the FF exposure (insignificant correlation), which is probably due to the mobility of T3.

Non-air monitoring based models showed good effectiveness to predict the exposure levels close to emission sources for SMAW and IW processes. Thus, to assess health risks or to evaluate compliance with workplace air standards, our modeling approach that is time and cost saving, can be adopted as a support tool or even an alternative to air monitoring.

Key messages:

- With a view to assess occupational exposure, non-air monitoring based models, that are time and cost saving tools, showed good prediction abilities for trace metal levels near welding emission sources.
- The use of non-air monitoring based models would help to control the working environment of occupationally exposed populations to welding fumes, which is useful to comply with air quality standards.

An investigation of putative exposure of staff to novel psychoactive substances in a prison

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Issue:

In a prison in Scotland, an increasing number of incidents occurred where staff became unwell secondary to potential exposure to novel psychoactive substances (NPS) smoked by prisoners. There were high levels of concern for the safety of individual staff, and for establishment staffing. NPS use is a significant problem in custodial settings, and impacts individuals and establishments.

Methods:

HMP and HPT led an incident response: HMP focused on prevention and direct management of incidents; HPT focused on exposure circumstances, clinical presentation and toxicological testing of symptomatic staff. A protocol was agreed between all agencies involved. Over 8 months, all incidents' initial assessment and any subsequent clinical and toxicological results were collated and analysed by HPT.

Results:

There were 19 incidents involving 16 staff members. Cases presented in clusters, in one instance 13 people presented over 5 days. Five presented in early 2018.

Individuals reported a wide range of non-specific physical and psychological effects; some cases experienced severe impairment of day-to-day function. The most common effects were headache and fatigue but some reported sleep disturbance and confusion lasting up to 72 hrs. There were no significant clinical observations at hospital, and the 3 tests for toxicology were negative.

Lessons:

The individuals affected by these incidents experienced physical and psychological distress, and impairment of daily functioning which impacted on the safe function of the establishment. It is unlikely staff presentations were due to toxicological effects from substances used by prisoners. It is possible their symptoms were psychosomatic. This could be further investigated, and consideration given to supportive intervention for staff affected by exposure to NPS. The investigation demonstrated excellent collaborative work between the prison, health services, and forensic laboratories in a novel investigation into NPS exposure in prisons.

Key messages:

- NPS use, and subsequent exposure to staff, is a growing issue in custodial settings.
- A combination of supportive interventions for staff, including reduction and mitigation of risk of exposure to NPS, plus control of substances use in prisons can help.

Life style habits of truck drivers in France

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Background:

European truck drivers' (TD) lifestyle behaviors is a topic of great interest but not frequently studied. Unhealthy behaviors such as smoking, alcohol consumption, drug abuse or a lack of physical activity infer a greater risk for cardio-vascular diseases and road accidents. This study aimed at describing life TD habits.

Methods:

A prospective cross-sectional study was conducted in April 2018 on 4 rest areas with the support of the nonprofit organization ''Fondation VINCI Autoroutes pour une Conduite Responsable''. 515 TD were interviewed randomly at 4 highway rest stops. Life habits data were collected and analysis was conducted using univariate statistics.

Results:

38.6% (n = 199) declared to be daily smokers, with no significant difference when reported to nationality or age. 24.6% (n = 126) are normal weighted, while 72.4% (n = 373) have a BMI superior to 25. 58.8% (n = 303) of the TD drink alcohol on a regular basis, and 8.5% of them (n = 26) on a daily basis. High blood pressure is significatively associated with alcohol consumption (5.2% vs. 12.9%, $p < 0,05$) and obesity (19.4 % vs. < 10%, $p < 0,001$). 2.5% (n = 13) of the TD consume psychoactive drugs, most of them cannabis. As concerns diet: 32.8% (n = 169) consider it as balanced, 32.6% (n = 168) not balanced, and 34,6% can't qualify it. When TD think their diet is unbalanced, they judge it too fat (75.6%), too sweet (61.9%) or too salty (50.6%).

Conclusions:

The most striking results concern TD expectations, since 41.7% of the daily smokers and 5.3% of the alcohol consumers would be interested in help measures to stop. TD with the highest BMI are the most demanding for a diet help. Motorway operators, unions and compagnies should fulfill these expectations, since TD in better health are less frequently involve in road accidents. TD spend a lot of time on rest area and this offers interesting periods of time to develop health education specifically for them.

Key messages:

- Many truck drivers prove to be daily smokers and/or with excess weight, and/or eating an unbalanced diet. High blood pressure is significatively associated with alcohol consumption and obesity.
- Expectations are high as concerns help measures to reach healthier behaviors and live a better life.

Lung cancer screening by low-dose CT among asbestos-exposed workers: first results of a pilot program

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Background:

Occupational asbestos exposure (OAE) is a risk factor for lung cancer (LC) and can cause malignant diseases decades after exposure. Lung cancer screening with low-dose computed tomography (LCS) in heavy smokers has shown LC-mortality reductions in two large trials. Recent guidelines advocate LCS in high-risk populations with OAE and additional smoking history.

Methods:

A structured pilot program on LCS in three German regions has been implemented from 2014 to 2018. Eligibility criteria are: OAE $\geq$10 years starting before 1985 or diagnosis of OAE-related lung disease other than cancer, age $\geq$55 years and smoking history $\geq$30 pack years. Eligible persons are centrally invited for LCS on a voluntary basis in 12 months intervals. All persons willing to participate receive obligatory physician counselling before LCS. CT scans are performed according to a standardized protocol. The program provides technical quality assurance as well as independent double reading of all suspicious findings and of a random sample of all CT scans.

Results:

Of 2715 and 1534 persons invited to first and second LCS, 1571 (57.9%) and 715 (46.6%) agreed to participate, respectively. Main reason for disagreement was principal refusal of LCS (15.5% in first and 22.2% in second LCS), whereas 8.5% and 6.9%, respectively, refused after counselling. Additionally, 12.9% and 5.7% did not respond at all. Effectively, 68.8% and 70.6% of those who initially agreed, received first and second LCS, respectively. Variations between regions were observed (range 61.0% to 79.8%). First preliminary outcome assessment shows detection rates of 0.019 and 0.011 in first and second LCS, respectively.

Conclusions:

A substantial group of eligible persons with OAE participated in LCS after physician counselling. Participation remained stable over two screening rounds. First results show detection of LC in the expected range. The effectiveness of early detection of LC in OAE needs to be evaluated further.

Key messages:

- Participation over the first two screening rounds in structured lung cancer screening remained stable among eligible persons with OAE and smoking history who were counselled by physicians.
- Detection of lung cancer in a structured pilot screening program in three German regions seems to be within the range to be expected from previous research.

The barriers of workplace safety and health management: from the supervisor's perspective

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Background:

Previous researches demonstrated that workplace safety and health (WSH) management plays a major role in promoting worker's health and well-being. However, organizational factors hinder promoting WSH management program. The main aim of this study is to explore the probable existence of barrier from WSH supervisor's perspective.

Methods:

This study employed a qualitative design to gain an in-depth and holistic understanding of WSH from the supervisor's perspective. Eight focus groups were conducted in Taiwan. A total of 81 supervisors (employer, human resource section, environmental safety section) from the manufacturing industry, construction industry, and service industry participated in this study. All interview contents were transcribed and coded. Matrices were constructed to identify themes and evolving concepts.

Results:

Three main barriers were identified1. Lacking of top management commitment and support (e.g., top management focused more on employees' work performance than their safety and health, top management commitment was just a declaration but with no action, and top management only conducted the traditional occupational hazards control to fit the minimum standards of national policy, and ignored employees' mental health and well-being); 2.Lacking of employee's safety awareness (e.g., employee lacked the motivation to attend training program; 3.Organizational resources were not enough to implement occupational safety and health management (e.g., the supervisor lacked professional skills in promoting WSH program).

Conclusions:

The study findings provide an integrated basis for practical application and further research. The workplace supervisor should be trained the professional skills in workplace safety and health management. Then, the workplace psychosocial safety climate can be built while top management and employee have higher workplace safety and health awareness.

Key messages:

- This study contributes to occupational health research from the supervisor's perspective.
- This study also hints at the potential role of top management promoting employee's health and well-being.

Sexual harassment at work: Design of a new questionnaire to measure sexual harassment

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Background:

Sexual harassment is a complex phenomenon and our knowledge is hampered by a lack of consensus on the definition and measurement. However, workplaces need reliable instruments that provide a nuanced understanding of sexual harassment and input for action to mitigate negative consequences. The aim of this project is to help workplaces prevent and manage sexual harassment, which include developing a new and comprehensive instrument to monitor sexual harassment (Inventory of Workplace Sexual Harassment). In this abstract, we explain the process of designing the questionnaire.

Methods:

The design process follows three steps: (1) Identification of a theoretical and conceptual framework, (2) item development and (3) field testing. First, we identified relevant theoretical and conceptual frameworks, which we discussed with an expert group consisting of researchers and stakeholders (employer and trade unions). Second, we developed items based on expert inputs and previous surveys. We adapted the first version of the questionnaire following a feedback round with the expert group. Third, we will complete field testing in 2019-2020. Field testing encompasses cognitive interviews (n = 15) and in-depth interviews with men and women exposed to sexual harassment to assess clarity and relevance (in 2019), and a pilot study at 15 workplaces to assess prevalence and usability (in 2020).

Results:

Based on the theoretical and conceptual model from Fitzgerald et al, we developed a preliminary version, consisting of 22 items that cover three domains: (1) unwanted sexual attention, (2) gender harassment and (2) sexual coercion. The survey draws on questions from SEQ-DoD and Bergen Sexual Harassment Scale. Results from field testing will be available for the conference.

Conclusions:

The Inventory of Workplace Sexual Harassment will provide a comprehensive and validated measurement of workplace sexual harassment and will help workplaces prevent and manage sexual harassment.

Key messages:

- Sexual harassment is a complex and multifaceted phenomenon, but our knowledge is hampered by a lack of consensus on the definition and measurement.
- This study contributes with a new instrument measuring the prevalence of workplace sexual harassment and tools for prevention and management of sexual harassment.

DK Health at work, Social security

Two step cluster analysis of burnout among preschool teachers

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Background:

The burnout is influenced by a variety of personal, work-related and client-related factors, which are included in different domains of Copenhagen burnout inventory (CBI). The aim of this study was to examine if there are different groups of preschool teachers which differ in scores on different domains of CBI.

Methods:

This was the analysis of the data from the survey on burnout on a National representative sample of 456 preschool teachers in Serbia. The study was conducted between October of 2018 and January 2019. The study instrument contained questions on socio-demographic characteristics, workplace environment characteristics, and Copenhagen burnout inventory. We used two-step cluster analysis in SPSS to segment the participants based on age and average scores on personal, work-related and client related domains of CBI.

Results:

Our participants clustered in three distinguished groups: participants aged 35.31 years, who worked in shifts, with personal burnout average of 29.46, work-related burnout average of 24.06 and client related burnout average of 19.46; participants aged 44.09 years, who worked in shifts, personal domain scores of 55.24, work-related burnout scores of 51.72, and client-related burnout scores of 51.13; and participants aged 43.01 years, who did not work in shifts, with personal burnout scores of 36.47, work-related burnout scores of 31.95, and client-related burnout scores of 32.08.

Conclusions:

Participants clustered in three different groups, and the group with the highest average age and with the shift work had higher scores on all three domains compared to other groups.

Key messages:

- Preschool teachers clustered in three groups with different scores on domains on burnout.
- The group with the highest average age had the highest scores on all three domains of burnout.

Occupational Eye Trauma: a major public health issue in Rabat, Morocco

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Occupational eye trauma is a global cause of visual morbidity. According to the WHO, 55 million ocular lesions occur each year, and 1.6 million cases of total blindness caused by trauma. Although common in Morocco, these traumas have not been the subject of recent and targeted investigations.

The objective of our work is to evaluate the frequency of occupational eye trauma per projectile, and to encourage the reinforcement of safety measures. This is a cross-sectional descriptive study, carried out in the Ophthalmic Emergency Department, at the University Hospital of Rabat, Morocco, and including all patients who presented to the same doctor's consultation, between December 2016 and December 2018. The study involved 914 patients, 406 women and 508 men, with an average age of 36. The average consultation time is 35 days after the onset of symptomatology.

In 2 years, and out of 914 people, 382 (42%) are victims of ocular trauma; and 167 are victims of projectile eye trauma during professional practice, an overall prevalence of 18%, or 51% of all trauma.

The average age was 32 years, 92% of males. The average consultation time was 2 days after the accident. In addition, 75% of consultants for occupational eye trauma have a similar history of trauma, 3 out of 4 people. As a consequence, the study shows that 85% of these patients had a superficial corneal foreign body; 11% presented with a corneal ulcer without individualization of a foreign body; while 4% of these had a corneal wound, an intraocular foreign body and posttraumatic retinal detachment. Therefore, eye trauma is a real public health problem. They account for 42% of consultations, half of which are associated with professional activities, mainly affecting young and active men. If they are benign in most cases, these traumas can nevertheless cause blindness in 4%.

The high number of recidivism (75%) highlights the lack of awareness of the target population for better prevention.

Key messages:

- The results of this work prove that occupational ocular trauma, avoidable circumstances, are however frequent in our context and can cause severe lesions, with a reserved prognosis.
- Workplaces with a high risk of eye trauma should strengthen their protective measures and training programs should be put in place for both workers and occupational physicians.

Diurnal rhythms of cortisol and melatonin in night eating and non-night eating male police officers

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Background:

Working during the night has in previous studies been associated with behavioural changes and diseases. Disturbance between behavioural and biological circadian rhythms have been suggested as a possible mechanism linking night work with cardiovascular diseases and pre-diabetic changes. The aim of this study was to investigate if night eating during two, four and seven consecutive night shifts is associated with differences in the diurnal rhythms of cortisol and melatonin in male police officers in Denmark.

Methods:

We conducted an experimental study among 37 male police officers in Denmark who all collected data on the last night shift in three different work schedules with two, four and seven consecutive night shifts, respectively. Night eating was self-reported and defined as eating at least one main meal between midnight and early morning. Differences in the diurnal rhythms of concentrations of cortisol and melatonin in saliva were tested by phase changes and amplitude differences.

Results:

Sixteen (43.2%) police officers ate a main meal during the last night shift in all three work schedules. The timing of the lowest cortisol concentration was on average delayed with 2:10 hours (95% CI 0:24-3:56 hours) and the level of the lowest cortisol concentration was on average supressed with 66% (95% CI 47-94%) for night eaters compared to non-night eaters. There was no association with number of consecutive night shifts. The phase and amplitude of melatonin were not statistically significantly different between night eaters and non-night eaters.

Conclusions:

Night eating behaviour is associated with differences in the diurnal rhythm of cortisol in Danish male police officers working during the night. The difference in cortisol rhythm between night eaters and non-night eaters on night shifts is not affected by the number of consecutive night shifts.

Key messages:

- Night eating behaviour is associated with differences in the diurnal rhythm of cortisol.
- Future studies should focus on potential health outcomes of night eating behaviour among night workers.

Attitudes of Polish employers towards smoking/e-cigarette use in workplaces

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Background:

For many years Poland has been undertaking initiatives aimed at reducing the problem of smoking among citizens. Many educational and legislative activities have been carried out. One of them was introduction of smoking ban in workplaces and other public places in 2010. The aim of the was to look for attitudes of Polish employers towards smoking and e-cigarette use in workplaces.

Methods:

The cross-sectional survey was carried out on representative group of 2,501 employers from Poland in July/August 2018. Respondents answered to the original questionnaire with help of Computer Assisted Telephone Interview (CATI) method. Questionnaire consisted of 19 questions regarding attitudes towards smoking and e-cigarettes use in their workplaces. Data were analyzed with the help of descriptive statistics, correlation analysis methods. Statistical significance was set at $p < 0.05$.

Results:

Only 44.9% employers agree they should not take care for creation conditions for smoking tobacco/e-cigarettes use during working hours. The majority of respondents (53.7%) believe that non-smokers (without going out to smoke) have fewer breaks in their work. In addition, 51.8% of respondents believe that smoking tobacco/e-cigarettes by employees brings economic losses to the company, and 55.0% think that smoking tobacco/e-cigarettes use during work spoils the company's image. At the same time, as many as 88.5% of respondents indicated that their workplaces did not carry out activities encouraging them to quit in the last two years and 52.8% do not believe in their effectiveness.

Conclusions:

Although respondents indicated the negative consequences for their companies because of tobacco smoking/e-cigarettes use by employees, the majority of employers do not take actions to reduce this problem. As big part of them sees also economical and image problems they should be supported in their activity to reduce the tobacco/e-cigarette use among employees.

Key messages:

- Employers see economical and image problems cause by smoking/e-cigarette using employees.
- Employers should be supported by public health professionals as they do not believe nor undertake effective activities to reduce tobacco smoking/e-cigarettes use.

A taxonomy of mechanisms underpinning the impact of welfare rights advice on health

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Background:

Welfare rights advice has potential to help address the social determinants of health and reduce inequalities. Existing logic models identify the sequence of proximal to distal outcomes following welfare advice, but attribution remains challenging. This paper reports on the contextual influences and key mechanisms leading to health outcomes.

Methods:

We undertook comprehensive searches of the literature addressing the links between welfare advice and health. Titles and abstracts were screened first, then full text, using inclusion and exclusion criteria. Employing a realist logic of analysis, data extraction and synthesis focused on disentangling evidence of how and why advice improves (or not) health related outcomes, depending on the context. These insights were then paired with existing theory (either explicitly referenced or inferred by authors), in order to produce a robust explanatory model of when and how advice leads to improved health.

Results:

59 articles were included in the analysis. Preliminary findings point to the significance of target group in influencing the types of outcomes achieved. Fineman's (2013) typology of embodied, situational and structural vulnerability helped explain the differential impact of advice. Where people experience embodied vulnerabilities, such as life-limiting illness or disabling physical or mental health conditions, advice may increase quality of life, but is less likely to improve existing health status. Likewise, advice interventions alone are unlikely to alter health outcomes stemming from entrenched structural disadvantages such as poverty or discrimination, and appear to be most effective in addressing situational vulnerabilities generated more temporarily by difficult circumstances.

Conclusions:

The review provides a more nuanced understanding of how and why welfare advice may impact on health. These insights will help to more appropriately target, tailor and monitor the health impact of welfare advice.

Key messages:

- Welfare advice has differential impact, depending on specific client vulnerabilities.
- This highlights the importance of appropriate targeting, and selecting suitable measures of success.

Setting the agenda for further research on health and welfare

Monique Lhussier

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Background:

Given the recognised relationship between poverty, welfare provision and health, welfare rights advice has emerged as a potentially key intervention in improving health and reducing inequalities. The generation of evidence in this area has proven difficult however, creating a need to take stock of existing research and develop an agenda for future work.

Methods:

A series of four workshops was convened involving researchers from four UK universities who had previously undertaken work examining the relationship between welfare advice and health, from a range of methodological perspectives. Run concurrently to a scoping of the literature, these workshops aimed to synthesise lessons from prior research; formulate outstanding research questions; and outline potential methodological approaches for addressing these. A survey was undertaken with professionals (from welfare or legal advice sectors, the health sector, commissioning, local government, and housing services, n = 50) to test out, refine and add to these research questions.

Results:

Key research questions developed from these workshops were:

- Are there inequalities in the impact and reach of advice services across social groups? How/ does advice delivery mode matter?
- What are the individual and system level impacts of the de-implementation of advice services?
- What are the impacts of changes to welfare provision on children, inter-generationally and throughout the life course?
- How do experiences of social welfare vary by social group, geographically and across generations? How do different identities combine to influence how social welfare is understood?

Conclusions:

While the collaborative process brought challenges in balancing research and practitioner expertise, this model of working has been successful in setting an agenda for further research with maximum utility to practice. Direct outputs from the projects have been the collaborative submission of a journal article and a research bid.

Key messages:

- The collaboration, which was supported by the NIHR School of Public Health Research, led to the establishment of a concise research agenda.
- Through extensive stakeholder consultation, this will have maximal utility for practice.

Trajectories of musculoskeletal pain among midlife employees

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Background:

We examined the developmental trajectories of multisite musculoskeletal pain to acquire the developmental patterns of musculoskeletal pain among midlife municipal employees and whether pain trajectories associate with common mental disorders or behaviors.

Methods:

Middle-aged (44 to 67 years) municipal employees from the city of Helsinki were studied. The baseline survey was conducted in 2000-02 (N = 8960) and two follow-up surveys in 2007 (N = 7332) and 2012 (N = 6809). Repeated measurement of musculoskeletal pain in four anatomical sites was obtained. Trajectories of number of pain sites (0-4) were modeled using latent class growth analysis (n = 6527). Common mental disorders were measured using the General Health Questionnaire 12-item version (GHQ-12). Information on behavior factors, morbidity, and the socioeconomic position was obtained from the questionnaire survey. Associations of baseline factors with pain trajectories were assessed by multinomial logistic regression.

Results:

We found four distinct trajectories of the number of pain sites: high (15%), increasing (24%), decreasing (20%) and low (41%). In multivariable multinomial regression model high, increasing and decreasing trajectories were strongly associated with higher odds with both medium and high common mental disorders. However, the magnitude of the association was much higher for high vs. low trajectory group due to medium (OR 3.70, 95% CI 2.81-4.89) and high (OR 5.37, 95% 4.36-6.61) common mental disorders. Mean score of common mental disorders was also highest for high trajectory group. High, increasing and decreasing trajectory group were also associated with poor behavior, having one or more musculoskeletal comorbidities and low socioeconomic position.

Conclusions:

Multisite musculoskeletal pain remain persistent among midlife employees and those high trajectories of musculoskeletal pain are associated with common mental disorders, behavior, and musculoskeletal comorbidities.

Key messages:

- Four distinct trajectories of number of pain sites was identified among midlife municipal employees.
- High common mental disorders and poor behavior, as well as low socioeconomic position and musculoskeletal comorbidities were strongly associated with pain trajectories.

DL Health services research

Direct access physiotherapy for patients with musculoskeletal disorders: a systematic review

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Background:

Although the benefits of physiotherapy is well supported in the literature, the impact of having direct access to physiotherapy is not well established. Update of the current available evidence is warranted. The aim of this systematic review was to update the current evidence regarding the impact of direct access physiotherapy compared to usual care for patients with musculoskeletal disorders.

Methods:

Systematic searches were conducted in 5 bibliographic databases up until May 2018. Two independent raters reviewed studies and used the Quality Assessment Tool for Quantitative Studies to conduct the methodological quality assessment and a data extraction regarding patient outcomes, adverse events, health care utilization and processes, patient satisfaction and health care costs.

Results:

Sixteen studies of weak to moderate quality were included. Five studies found no significant differences in pain reduction between usual family physician led care and direct access physiotherapy. However, three studies reported better clinical outcomes in patients with direct access in terms of function and quality of life. Five studies did not observe any adverse events with direct access physiotherapy. Three studies showed shorter waiting time and four studies reported fewer number of physiotherapy visits with direct access. Three studies showed that patients with direct access were less likely to have medication and imaging tests prescribed compared to usual care. Five studies reported higher levels of satisfaction for direct access. In terms of health care costs, four studies demonstrated that costs were lower with direct access and one study reported similar costs between both types of care.

Conclusions:

Emerging evidence, although of weak to moderate quality, suggest that direct access physiotherapy provides equal or better outcomes than family physician led care models for musculoskeletal disorders patients. More methodologically strong studies are needed.

Key messages:

- This review supports the efficacy, safety and cost-effectiveness of direct access PT, while increasing access to care with a more efficient use of resources.
- There is a need for more methodologically strong studies to evaluate the efficiency of direct access models of care of physiotherapy for patients with MSKD.

Mapping, guiding, and assessing social prescription services in the UK

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Background:

The use of non-health service referral, or 'social prescribing' interventions have been proposed as a cost-effective alternative to help those with long-term conditions manage their illness and improve health and well-being. We are generating theory through review and primary data collection relating to the social prescribing system, how to maximise the benefits of this system and how it might be implemented.

Methods:

A realist synthesis and evaluation. Working with three UK case-sites who are all at various stages in the process of setting up social prescription services, we are conducting patient pathway analyses, focus groups, and interviews. An important component of this work is iterative, targeted reviews of the literature relating to these pathways and identified mechanisms to assess effectiveness and reach.

Results:

The study is ongoing; however, we are testing prototype theory generated in a previous realist review (presented last year) and elaborating on which mechanisms within each pathway relate to suitable population types and aspects of wellbeing.

Conclusions:

We aim to draw together service delivery practitioners, users, researchers and clinicians to create specified theory for setting up social prescription services. This guidance will be context sensitive and make recommendations for increasing acceptability and spread of complex system service delivery and interventions.

Key messages:

- We are building highly specified, context sensitive system specification and 'lessons learned' implementation guidance for social prescribing programmes in the UK.
- We are producing these outputs through collaborative partnerships with services delivering programmes as they develop, using realist evaluation and qualitative comparative methods.

Developing a Patient Advocacy Scale for Nurses

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Background:

Patients can sometimes become defenseless. Patient advocacy is one of the most important roles of nurses in healthcare. No valid and reliable instrument that evaluates nurses' behavior as patient advocates has been encountered in the literature. The purpose of this study was to develop a patient advocacy scale for nurses.

Methods:

This methodological study was conducted in Istanbul over the period October - December 2018 with 500 nurses. Initially, a scale of 57 items was devised after discussions with 14 academic and clinical nurses. The scale was tested for content validity using the Content Validity Index and for construct validity with Exploratory Factor Analysis, after which the scale's reliability was evaluated for item-total correlations using Pearson's correlation analysis and for internal consistency with Cronbach's Alpha.

Results:

Content validity index for the scale was found to be .97. The first factor analysis resulted in a 10-factor construct, where the eigenvalue for the scale was greater than 1 and the construct explained 63.43% of total variance. At the end of the factor analysis, items with factor loadings of less than .30 and those that appeared in more than one factor with differences of less than %10 were removed from the scale one by one and the analysis was repeated 18 times. In the last factor analysis of the 39-item scale, a 7-factor construct was found with an eigenvalue greater than 1 that explained 61.3% of total variance. The scale's item-total correlations ranged between .42 - .75 and Cronbach's coefficient alpha was calculated to be .95.

Conclusions:

The newly developed instrument was found to be valid and reliable. The scale can be used to assess the patient advocacy behavior of nurses working in Turkey. Its intercultural adaptation for use with nurses working in other countries is recommended.

Key messages:

- The Patient Advocacy Scale for Nurses has been found to be valid and reliable.
- It can be used to assess nurses' patient advocacy behavior.

Infrequent patient-physician conversations about sexual health at an Austrian university hospital

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Background:

Many physical diseases are associated with sexual health problems. Studies concerning physicians' barriers to patient-physician conversations concerning sexual health often fail to go beyond descriptive analyses of such barriers. The current study focused on finding those barriers that best predict the frequency of patient-physician conversations concerning sexual health.

Methods:

An online-questionnaire assessed physicians' sociodemographic information, frequency of holding a discussion on sexual health issues with their patients, and self-perceived barriers to asking patients about sexual health issues. The study was conducted at an Austrian university hospital. 102 physicians (53.9% women/46.1% men) participated. Logistic regression models were calculated to analyze associations between physicians' barriers and the frequency of patient-physician conversations concerning sexual health in everyday practice.

Results:

Of the physicians, 61.8% reported having a discussion on sexual health with their patients at least rarely in their everyday clinical practice. Physicians' barriers that predicted low frequency of patient-physician conversations concerning sexual health were: expecting the patient to initiate such a conversation, not feeling responsible for this health issue, fear of offending the patient, and one's own shame and discomfort.

Conclusions:

In contrast to other studies about physicians' barriers to patient-physician conversations concerning sexual health, in the current study time constrains were not a prominent barrier to such conversations. Future training should help physicians recognize the relevance of sexual health in one's medical discipline and they should be taught how to overcome their feelings of shame or how to cope with patients' negative reactions during patient-physician conversations concerning sexual health.

Key messages:

- University hospital physicians rarely address sexual health issues in patient-physician conversations.
- Physicians most often handed the responsibility to initiate such conversations to the patient.

The risk of emergency department visits in adults living in rural France

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Background:

Individuals living in rural areas have poorer health outcomes due to complex causal pathways related to socio-economic status, health behaviors and lower use of primary care. Emergency department visits without inpatient admission (hereafter ED visits) are an indirect measure of access to primary care.

Objective:

To analyze the determinants of ED visits among French adults living in rural areas.

Methods:

We analyze survey data from the CONSTANCES cohort study, a representative sample of French adults aged 18-69 years. These data on individuals' demographics, self-reported and physician-reported clinical indicators, and individual socio-economic status, are linked to France's claims database (SNIIRAM). We analyze the risk of having at least one ED visit, in 2016, using a multivariate logistic regression model.

Results:

Among 12,834 adults included in the study, 1,412 (11%) had at least one ED visit in 2016. After adjustment, the ED visit risk was associated negatively with female gender (OR = 0.87; $p < 0.01$), age (OR = 0.97; $p < 0.01$), secondary education (OR = 0.85; p = 0.03), higher use of GPs (OR = 0.99; p = 0.02); and positively associated with the number of comorbidities (OR = 1.1; $p < 0.01$), poorer self-reported health status (OR = 1.01; p = 0.02), a higher self-reported depression score (OR = 1.01; p = 0.02), and acute care inpatient admissions (OR = 2.4; $p < 0.01$).

Conclusions:

These results suggest that, among adults living in rural France, those with a lower educational level are at higher risk of ED visits.

Policy implications: To reduce health disparities among rural and urban areas, policymakers and primary care professionals should focus on targeted outreach strategies to identify high-needs individuals.

Key messages:

- The risk of emergency department visit varies significantly among adult living in rural France.
- Among adults living in rural France, those with a lower educational level are at higher risk of ED visit.

Health benefits through prevention: there is still a lot to be gained

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Introduction:

In November 2018, the Ministry of Health, Welfare and Sports presented the National Prevention Agreement (NPA). Within this NPA, interventions targeting smoking, being overweight and problematic alcohol use were proposed to induce lifestyle changes. In addition to measures aimed at these three themes, there is also a range of interventions that are promising, either because they could be cost saving or cost-effective, or because they have a positive impact on burden of disease. We explored which preventive interventions are promising in the Dutch context and systematically quantified costs, savings and health effects.

Methods:

In a literature search via the website kosteneffectviteitvanpreventie.nl we selected interventions that: a) have not yet been introduced in the Netherlands; and b) were promising with respect to effectiveness and cost-effectiveness. All interventions, including health protection and environmental measures, were eligible. We estimated the number of people who are eligible and compliant, costs and possible savings related to the interventions and health effects in terms of DALYs avoided. Interventions were ranked with regard to possible savings and DALYs avoided.

Results:

Our exploration shows a number of preventive interventions that are cost saving or cost-effective. These interventions are aimed at anxiety and depression, heart disease, skin cancer, fractures, air quality and road safety. Examples of cost-saving or cost-effective interventions are a food tax on food and drinks with high fat/sugar content, screening an aneurysm of the aorta and fully subsidized sound insulation of homes.

Conclusions:

Our study shows that there are much more preventive opportunities than those presented in the NPA. The substantiation of the interventions is often based on foreign research and findings therefore cannot be simply translated to the Netherlands. However, the interventions identified in this study are promising and deserve further consideration.

Key messages:

- Health gain by environmental measures.
- Many interventions are not systematically implemented.

Societal Expenditure on Prevention

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Introduction:

In 2015, Dutch healthcare expenditure exceeded 85 billion euros. But what about prevention? In this study we estimated national expenditure on prevention. A distinction was made between health protection, health promotion and disease prevention. In the estimation of prevention expenditures, this study is limited to universal, selective and indicated prevention, as healthcare-related prevention can hardly be distinguished from curative care. This study analyzed expenditure on preventive activities in the Netherlands in 2015 and took a societal perspective.

Methods:

We used various sources to investigate spending on prevention in 2015. Insofar as costs were part of healthcare expenditure, estimates were based on the Care Accounts of Statistics Netherlands. For the remainder, we estimated expenditure using annual reports and annual accounts of governments and other organizations. We included preventive activities by consumers, industry, NGOs, insurance companies, and government.

Results:

In 2015, an estimated € 12.4 billion (1.8% of the GDP) was spent on prevention: € 2.4 billion on disease prevention (19%), € 0.6 billion on health promotion (5%) and € 9.4 billion on health protection (76%). This is a decrease of 17% compared to 2007, the last year that a similar estimate was made. Within health promotion, the largest expenditure was for working conditions and safety: € 160 million. € 67 million was spent on mental disorders. The largest expenditure item within disease prevention was dental care: € 675 million. Within health protection, this was the sewer by more than € 3 billion.

Conclusions:

Spending on prevention is relatively low compared to total spending on healthcare. The largest part is targeted at health protection. In the coming years there may be an increase in expenditure, due to more governmental prevention policies such as the National Prevention Agreement.

Key messages:

- Spending on prevention is relatively low compared to total spending on healthcare.
- Relatively little money for health protection.

Used and foregone of primary care in French university students

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Background:

University students tend to find it difficult to ask for help especially when it comes to health issues. The objective of the study was to determine the health issues of general practitioner and the reasons of primary care foregone in university students.

Methods:

A cross sectional study was conducted in 2018 in Normandy university students (France). The socio demographic characteristics of the university students were collected. The primary care seeking during the previous 12 months were assessed by the consultation to the general practitioner and categorized: acute physical issues (stomach aches, cough ...), chronic physical issues (asthma, diabetes...), mental health issues (stress, anxiety...) and preventive medicine (vaccine, certificate...). The foregone of primary care during the previous 12 months and the barriers to accessing primary health-care-seeking were also collected.

Results:

1179 university students (58.0% of women, age mean 20.4 years) were included. Frequency of health issues in the last 12 months were preventive issues (57.2%), acute physical issues (52.2%), chronic physical issues (16.7%) and psychological issues (18.4%). The foregone of primary care of the university students was reported by 20.5% of university students. The three main barriers reported by these students to accessing primary health-care-seeking behaviour were self-treatment (60.6%), lake of time (64.7%) and financial barriers (25.4%). Logistic regression showed that the foregone of primary care was positively associated with being female students AOR = 1.69 CI95% (1.21-2.36), grant holder AOR = 1.52 CI95% (1.10-2.02), and living in rented accommodation AOR = 1.47 CI95% (1.03-2.02).

Conclusions:

Half of university students consult the general practitioner for physical concerns and one fifth for psychological disorders. However with 20% of primary care foregone by university students, the access of primary care in the targeted population could be improved.

Key messages:

- One fifth of university students foregoes to primary care.
- Female students, grant holder and living in accommodation are the risk factors of foregone of primary care.

Evaluation designs of outpatient health centres focusing on vulnerable patient groups

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Background:

Homeless and non-insured persons experience worse physical and mental health than comparable populations. Outpatient (public) health institutions, which are easily accessible, contribute considerably to the medical treatment of vulnerable patient groups. Sound evaluation methods, indicators and instruments are necessitated to target patients' needs and to enable strategic health and social policy planning.

Methods:

We conducted a systematic literature search in several databases (PubMed, EMBASE, PsycINFO etc.) for studies from 2000 to 2019 reporting on evaluations in outpatient health institutions for homeless and/ or non-insured patients. In addition, we contacted 5 Austrian public health/ research institutions dealing with complex interventions for relevant publications.

Results:

12 evaluation studies and 7 evaluation reports met our inclusion criteria. Evaluation designs mostly considered various target groups and nearly all assessments pursued a 'mixed-method' approach. 13 publications assessed socio-demographic data, 11 the use of health and social services and 7 patients' health status. Further indicators related to 'satisfaction issues' such as patients' satisfaction with the provided range of health and social services (n = 7). 6 publications reported on health economic indicators. In total, 7 out of 19 studies reported on evaluation instruments; most instruments (n = 6) were on patients' mental health status.

Conclusions:

Patients represented the major target group in the included evaluations. There is little research on evaluation indicators directing on health professionals. Evaluations focusing on the intersectional levels (e.g. the impact of health programmes for vulnerable groups on various institutions) are lacking.

Key messages:

- Evaluation designs involving 'hardly to reach populations' shall consider a 'participatory assessment approach' to avoid drop-outs and to create a trustworthy evaluation situation.
- Hence, evaluation indicators shall be commonly selected and adequately reflect patients' realities.

Healthcare providers' perceptions of difficulties related to frequent users of emergency departments

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Background:

Frequent users of emergency department (FUEDs; ≥ 5 ED visits/ year) are often vulnerable individuals cumulating medical, social and substance use problems. FUEDs often require complex and sustained care coordination generally unavailable in ED and are commonly considered contributing to ED crowding. In view of supporting ED health-care providers through specific training and interventions tailored to FUEDs, this study aimed to explore ED healthcare providers' perceptions of difficulties related to FUEDs.

Methods:

Participants (N = 208) were ED healthcare providers (i.e., nurses, physicians) from 75 university and community hospitals in Switzerland (71% of all EDs) who answered a questionnaire on FUEDs. They were asked to indicate the extent to which FUEDs represent a problem in their ED. Perceived difficulties related to FUEDs were elicited by an open-ended question. Conventional content analysis was used to extract common categories and themes.

Results:

Among the 208 participants, 134 (64%) reported that FUEDs represent a problem. Of those, 132 provided 1 to 5 answers to the open-ended question. Twenty-eight categories were identified and organized in 4 themes. First, participants reported difficulties related to FUEDs' characteristics themselves (e.g., problem's chronicity; behavioural difficulties) leading to healthcare complexity. Second, participants perceived negative consequences related to the presence of FUEDs in the ED (e.g., work overload, staff helplessness and fatigue). Third, ED healthcare offer was considered inappropriate and inefficient to respond to FUEDs needs and fourth collaborating with FUEDs' existing healthcare network was perceived as difficult.

Conclusions:

ED healthcare providers experience a wide range of difficulties related to the management of FUEDs. Providing training and implementing a case management intervention tailored to FUEDs might support ED health-care providers and contribute to address FUEDs' complex needs.

Key messages:

- ED healthcare providers perceive FUEDs to represent a problem.
- Perceived difficulties might decrease through training and case management support might contribute to better address FUEDs complex needs.

Is there an association between social determinants and care dependency risk?

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Background:

Despite a growing body of knowledge about the morbidities and functional impairment which frequently lead to care dependency, the role of social determinants is not yet well understood. The purpose of this study was 1) to examine the effect of social determinants on care dependency onset and progression, and 2) to analyse the effect of social determinants on various levels of care dependency.

Methods:

We used data from the Berlin Initiative Study (BIS), a prospective, longitudinal, population-based cohort study including 2069 older participants (≥70 years of age) with visits in 2009, 2011 and 2013. Care dependency was assessed if participants require substantial assistance in at least two activities of daily living for 90 minutes daily (level 1) or three hours+ daily (level 2). Social determinants were defined as partnership status, education, income, age and gender. Data were analysed with multi-state time to event regression modeling which simultaneously model several competing events, as well as not only first but also second or third event in one model.

Results:

During the study period, 556 participants (27.5%) changed their status of care dependency. Persons who reported having no partner at baseline were care-dependent more often than participants with a partner (43.7% 'no partner' / 27.1% 'with partner'). In the multiple model having no partner compared to having a partner was associated with a higher risk of transition from no care dependency to level 1 (HR: 1.25, 95%CI: 0.97-1.64), however failed significance. The significant association between care dependency and income and between care dependency and education ceased as well after adjustment for co-morbidities.

Conclusions:

Results indicate that older people without a partner tend to be on a higher risk of care dependency onset but not on a higher risk of care dependency progression. Inequality between education and income groups can be explained in terms of morbidity.

Key messages:

- The significant association between care dependency and income and between care dependency and education can be explained in terms of morbidity.
- Results indicate that older people without a partner tend to be on a higher risk of care dependency onset but not on a higher risk of care dependency progression.

Hospitalization patterns of uninsured as base for services and health need assessment

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Background:

Solidarity is crucial for shifting from centralized to social health insurance model. Uninsured receive at least emergency and basic services free-of-charge. To which extent this policy really covers their health and services needs remains to be assessed.

Methods:

DRGNational database (457 hospitals) was interrogated for continuous hospitalization of uninsured, 2014-2018. Use patterns were identified by episodes, LOS, diagnose, admission criterion. Avoidable admissions were assessed according to OECD criteria.

Results:

Number of hospital episodes in uninsured varied annually, difference ranging from -13.5 to 6.3%; largest decrease in 2015 possibly due to day surgery implemented in 2014. About 2.5-3% of all episodes and hospitalization days were for uninsured. Use patterns identified: Most common admission criterion: Emergencies (95%) compared to Specific diagnosis&treatment, Births, Potentially endemic/epidemic diseases; Most frequent diagnosis: Emergency around birth,Mental disorders, Respiratory infections; Men 45 years old living in rural areas prevailed significantly; significant gender difference by age (9 years; t-test, $p < 0.05$); 3% of hospitalizations could be avoided by assistance in prehospital (asthma, COPD, CHF, Diabetes&utation).

Conclusions:

The use patterns identified show inequity in access and gaps in policy meant to ensure solidarity in health. Day surgery was inittially beneficial in reducing financial burden, but addressing to prehospital health services continues to be low inducing overload of emergency units. A solution could be higher involvement of other sectors to ensure socio-economic security for all. Free-of-charge emergency hospital services ensure access for life threatening conditions but shortcut pre-hospital and postpone initial visits until non-preventable/-manageable stages.

Key messages:

- Reconsider services package to increase access for uninsured. Develop bridges between domains able to meet health related needs by intersectorial collaborations: labor, social, economic, health etc.
- Periodic analyze hospitalizations of uninsured, together with legal framework and sectoral policies to allow an appropriate decisions making and tailored intervention design.

The experience of patients and family caregivers during Hospital-at-Home in France

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Background:

Public health policies tend to generalize the use of Hospital-At-Home (HAH) to answer the growing will of patients to be treated or to die at home. HAH is a model of care that provides acute-level services in the patient's home with the interventions of variety of health care professionals. Relatives participate also in the interventions by helping for sick patients at home, but we lack data on the care of patients and caregivers in HAH. The aim of this study was to make an inventory of the experiences of patients and family caregivers in HAH.

Methods:

The research was qualitative using nineteen semi-directed interviews from nine patients and ten caregivers of one care unit of Greater Paris University Hospitals' HAH, and the grounded theory was used to analyze the transcripts. Caregivers were also asked, after the interview, to fill in the Zarit Burden Inventory.

Results:

HAH remained mostly unknown for patients and caregivers before the admission proposition and the outlook of being admitted in HAH was perceived as positive, for both of them. Caregivers had a versatile role throughout HAH, leading to situations of suffering, but also had sources of support. The return home was considered satisfactory by both caregivers and patients, related to the quality of care and increased morale despite HAH's organizational constraints. We noted an impact of HAH on the relationship between the patient and the caregiver(s), but caused by multiple factors: the fact that the care takes places at home, its consequences but also the disease itself.

Conclusions:

HAH strongly involved the patient's caregiver(s) all along the process. HAH's development necessitates to associate both patients and caregivers and to take into account their needs at every step. This study highlights the need to better assess the ability of the caregiver to cope with his or her relative in HAH with acute and subacute care at home.

Key messages:

- Health care services need to take into account family caregivers.
- Hospital at home services should be developped worldwide.

Effectiveness of participatory interventions in improving clinical coordination in Latin America

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Background:

Evaluation of interventions to improve clinical coordination across care levels is scarce in Latin America.

Aim:

to evaluate the effectiveness of interventions implemented through participatory action research in improving clinical coordination between care levels in public healthcare networks of Brazil, Chile, Colombia, Mexico and Uruguay.

Methods:

Quasi-experimental study (controlled before and after design). Comparable networks, one intervention (IN) and one control (CN), were selected in each country. Baseline (2015) and evaluation (2017) surveys were conducted applying COORDENA® questionnaire to a sample of primary (PC) and secondary (SC) care doctors (174 doctors/network/year). Designed interventions promoted clinical agreement and communication across levels for patients' follow-up. Outcome variables: a) intermediate: interactional and organizational factors; b) final: experience of clinical management coordination (care consistency and patients' follow-up) and general perception of coordination between levels. Poisson regression models were estimated.

Results:

Intermediate: interactional factors -personal knowledge and trust on the other care level-increased significantly in Brazil' and Chile' INs; and organizational factors -managers' support- in the INs of Colombia and Mexico. Comparing to CN in 2017, INs of Brazil, Chile, Colombia and Mexico showed significant differences in some factors.

Final: care consistency items -agreement over the treatments- improved in the INs of Brazil, Colombia and Uruguay; and patients' follow-up in the INs of Chile and Mexico. General perception of clinical coordination increased in the INs of Brazil, Colombia and Mexico. Compared to CN in 2017, only Brazil showed significant differences.

Conclusions:

Improvements in intermediate and final care coordination results, consistent with expected results, were observed in all the INs. Reduced implementation time and some process and context factors may have limited their impact.

Key messages:

- First study assessing the effectiveness of participatory interventions in improving clinical coordination between care levels in public healthcare networks of Latin America.
- Results showed changes in the intermediate and final clinical coordination results in the intervention networks. Longer implementation and evaluation times are expected to achieve greater impact.

Associated factors to the perception of clinical coordination in the Catalan national health system

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Background:

Clinical coordination across levels of care is a priority for health systems. The aim is to analyse the factors associated to a high perception of clinical coordination of primary (PC) and secondary care (SC) doctors of the Catalan national health system (NHS).

Methods:

Cross-sectional study based on the self-administered online questionnaire COORDENA-CAT. Data collection: October-December 2017. Study population: PC and SC (acute and long term) doctors of the public Catalan NHS that had been working for at least one year in the organization, had direct contact with patients and related with doctors of the other level of care. The participation rate was 20.5%, with a sample of 3308 doctors. Outcome variable: perception of clinical coordination across levels of care. Explanatory variables: socio-demographic, employment characteristics, attitude towards work, type of area (according to type of hospital and managing entity), interactional factors, organizational factors and knowledge of existing coordination mechanisms. Stratification variable: level of care. Descriptive and multivariate analysis by logistic regression.

Results:

Only 32.13% of PC doctors and 35.72% of SC doctors found that patient care was coordinated across care levels within their area. In both levels of care, knowing the doctor of the other level; finding that their practice influences the other care level; finding that the organization's management facilitates coordination; working in an area where the same entity manages SC and majority of PC and to hold joint clinical case conferences are factors positively associated to a high perception of clinical coordination. Besides, there are other positively associated factors exclusive for each level of care.

Conclusions:

Several common interactional and organizational factors are positively associated to a high perception of care coordination. Introducing policies to enhance such factors can foster care coordination in the Catalan NHS.

Key messages:

- This study found out factors associated to clinical coordination across care levels in each level.
- It helps to develop specific coordination policies by level of care to address those factors.

Geographical accessibility to permanent care centers of family doctors from Bihor County, Romania

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Accessibility (geographic or spatial) to health services is a component of health care services access that through measurement can assess inequities in health. Geographical accessibility can be measured using a geographic information system (GIS) where travel time is calculated from the patient's home to the place where a service is delivered. Permanent care centers of family doctors (PCCs) are units providing family medicine services (consultations, injections, solving minor emergencies) outside the work schedule of family doctors (night and holiday), for overloading prevention of emergency hospitals services by direct addressing or by calling to the unique emergency number 112. Bihor County has 617118 inhabitants in the 101 administrative-territorial units (458 localities), 334 family medicine practices, and there were 34 PCCs.

We intended to identify the number of localities in more than 10, 20 or 30 minutes of travel by car from the PCC (based on end-2018 data). A GIS was created using the QGIS application, which includes layers: the county border, the 454 localities and the georeferenced addresses of PCC. Using the ORS Tools plug-in, the appropriate isochrones were created. Then overlapping isochrones and localities (points), the number of localities for which the travel time to the nearest PCC is greater than 10, 20 and 30 minutes, respectively, was obtained.

The time needed for the inhabitants to reach the PCC is: more than 10 minutes for 247 localities; more than 20 minutes for 81 localities and over 30 minutes for 10 localities. The results are presented in the form of maps and in tabular form (localities). Using GIS, accessibility to medical services in a territory (city, county, country) can be measured. The application of free GIS software, QGIS, requires hardware, staff training, procedures (for work and decision-making) to research and improve population access to health services.

Key messages:

- Access to health services can be assessed using geographic information systems.
- The use of appropriate maps facilitates decision making to optimize health services.

Healthcare Use in Multimorbidity Patients

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Background:

The existence of multiple chronic conditions in the same patient is a public health problem, recognized as relevant to health systems. Individuals with multimorbidity have additional health needs, which in the context of continuous increase of life expectancy, imply a heavy burden to healthcare services.

Methods:

We analysed the association between healthcare use (primary care, medical specialist consultations and hospitalizations) and multimorbidity in the Portuguese population aged 25-74 years old, using the Health Examination Survey (n = 4911) data. Logistic regression models adjusted for predisposing (age, education) and enabling (income, region of residence) factors were fitted separately for male and female. Odds ratios and CI95% were estimated.

Results:

Prevalence of multimorbidity was 38.3% (95%CI: 35.4%; 41.3%). In males, after adjustment for confounding and when compared to patients without chronic conditions, multimorbidity was associated with greater use of primary care (OR = 3.7; CI95%: 2.3-5.8), medical specialist consultations (OR = 1.9; CI95%: 1.1-3.4) and hospitalizations (OR = 1.8; CI95%: 1.2-2.7). In female, statistically significant association between multimorbidity and healthcare use was observed for primary care (OR = 2.6; CI95%: 1.6-4.3) and medical specialist consultations (OR = 2.8; CI95%: 2.0-3.9), but not for hospitalizations. Both male and female with multimorbidity reported greater use of primary care, compared to individuals with only one chronic condition (OR = 2.4; CI95%: 1.3-4.4 and OR = 1.7; CI95%: 1.1-2.8, respectively).

Conclusions:

Our results show a greater healthcare use in patients with multimorbidity, both in primary and hospital care. The availability of scientific evidence regarding the healthcare use, by patients with multimorbidity, may substantiate the discussion about the possible need for the Portuguese health system to adapt to these patients, with changes in policies that will allow better and more efficient treatment.

Key messages:

- This study may support the discussion about the adaptation of Portuguese health system to patitents with multimorbidity.
- Further discussion on policy change is needed, targeting an efficient management of these patients.

Hospital volume and five-year survival after cancer surgery in 2007-2011 in Osaka, Japan

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Background:

The relationship between hospital volume (HV) and patient outcome is well-known evidence, and hospital volume is widely used as a quality indicator. In Japan, however, few studies are available on the associations between HV and survival after cancer surgery. This study aimed at examining the association between HV and longitudinal survival after surgeries of major cancer sites.

Methods:

This is a retrospective observational study. Using the Osaka Cancer Registry database, we identified patients who were diagnosed as major sites of cancer (esophageal, gastric, colorectal, pancreatic, lung, breast, and uterus cancer) between 2007 and 2011, and undergone surgeries in Osaka. To define the quartiles of HV (high, medium, low, and very low-volume hospitals), we ranked hospitals by annual surgical volume, sorted patients in descending order of HV, and assigned them into four equal-sized groups. The study outcome was five-year survival from the diagnosis. We analyzed the associations between hospital volume and survival among eligible patients aged between 15 and 84 years old, using Cox proportional hazard models. In the models, we adjusted for characteristics of patient and treatment received by the patients.

Results:

A sample of 86,867 patients were analyzed. The mortality hazards of patients treated at very low-volume hospitals were 1.4 - 2.1 times higher than that of patients treated at high-volume hospital in all selected cancers. However, absolute differences (percent points) in adjusted survival rates between high- and very low-volume hospitals were varied by cancer site: esophagus (24.2), stomach (14.9), colorectum (11.5), pancreas (9.2), lung (10.8), breast (2.4), and uterus (3.3).

Conclusions:

Very low-volume hospitals showed the poorest patient survival after cancer resections. Healthcare quality assessment at lower-volume hospitals and referrals to higher-volume hospitals are potential measures to improve survival of cancer patients.

Key messages:

- Patients treated at lower-volume hospitals had a higher mortality risk than those treated at higher-volume hospitals.
- Healthcare quality assessments and effective referrals of high-risk patients are potential interventions to improve patient survival.

Research Management Committee as strategic device for Implementation Research

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Issue/problem:

Implementation Research (IR) are particularly useful in identifying whether when an intervention does not succeed, this is because the intervention was ineffective in the new scenario or if a good intervention was poorly implemented. In order to do this, it is important to establish evaluation strategies capable of provide feedback and encourage learning and incorporation of changes. However, the best strategies for this are not clear yet.

Description of the problem:

Despite the existence of references with clear definitions of the outcomes for IR, it is still unclear what are the best strategies for the stakeholders' participation in these outcomes evaluation. By identifying that, the framework of participatory research could contribute to the choice of these strategies. We sought to retrieve some of the devices already used in other research to test whether they would be able to respond to the assumptions of IR. The chosen device was the Research Management Committee (RMC) which has its use evaluated by a qualitative study with focus group and the data review of the minutes of meetings held by the RMC.

Results:

The RMC functioned as a space where members of the research team, managers and workers from the services where the intervention occurred could meet systematically to plan, monitor and make adaptations in the IR. Besides its success as a tool for accessing outcomes, the RMC has also proved to be an important strategy to promote the increasing of acceptability, adoption, penetration and sustainability.

Lessons:

The RMC was an important promoter of the participation for the stakeholders in several aspects of the research; made possible the evaluation and monitoring of the meaning and feasibility of the research in the field of study from the point of view of those who live the experience of daily work and care; and favored access to the outcomes of IR in a transversal and organic way.

Key messages:

- The RMC is a strategic device for Implementation Research and configures a possibility to make the research a more dialogic and potentially transformative process.
- Besides its success as a tool for accessing outcomes, the RMC has also proved to be an important strategy to promote the increasing of acceptability, adoption, penetration and sustainability.

Improving inmates in Norwegian prisons' oral health

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Background:

Inmates in Norwegian prisons have poorer dental health than the general population. Inmates are a vulnerable group, often not able to take advantage of the dental health services or able to take care of own oral health. Poor dental health may have an impact on general health, in that people with poor oral health often suffer from pain and impairment and often feel restricted in activities at school, work or home. Oral health is declared as a human right by the World Dental Federation, and has gained recognition through the World Health Organization who emphasize on strengthening public dental health programs. The aim of this study was to explore the effect of an intervention based on Motivational Interviewing (MI) on improved dental health across inmates in Norwegian prisons.

Methods:

Inmates in Norwegian prisons were offered an oral examination and a small package containing toothbrush, toothpaste and floss- in addition to a short MI-intervention (20 minutes) by a dental hygienist. The participants were interviewed appr. 2 weeks later by a researcher to assess the effect of the intervention. The qualitative data-analyses were guided by thematic analysis.

Results:

The findings indicate that the intervention had a positive effect on behavioural change and motivation related to dental health care. The findings indicate that the intervention improved the inmates daily dental health care through better routines and motivation.

Conclusions:

The findings suggest that the intervention has a positive impact on inmates' oral health. The inmates changed routines related to daily dental care and reported higher motivation for taking care of their oral health. This is one of the first studies that explores the effect of an intervention to improve inmates' oral health and bridges a knowledge-gap in the literature. The findings may increase the understanding of how dental services should be organized and offered to provide dental health care for this vulnerable group.

Key messages:

- Poor oral health is associated with poor general health, and inmates in Norwegian prisons have poorer dental health than the general population.
- The aim of this study was to explore the effect of Motivational Interviewing on improved dental health across inmates. Findings: positive effect on the motivation and behavior related to oral health.

Improving diabetes care through educational intervention in primary care in rural China

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Background:

The burden type 2 diabetes mellitus (T2DM) is increasing in China, especially in rural areas. The New Round of Health Care Reform in China intended to strengthen primary care, and promote the vertical integration between hospital care and primary care, in order to respond to the threat of T2DM. This study aimed to assess the impact of an educational intervention to improve vertical integration and management of T2DM in primary care in rural China, on glycemic control and diabetes knowledge.

Methods:

The educational intervention was conducted in cooperation between the county level hospitals and primary care in rural areas (including township health centres and village clinics). T2DM patients in three counties in Jiangsu Province were randomly divided into an intervention group, which received an education-based intervention and follow-up visits, and a control group which received standard care. Questionnaire interviews and medical records were used to collect patient data, including fasting blood glucose (FBG) level and diabetes knowledge, at baseline and follow-up, in 2015 and 2016, respectively. Difference-in difference analysis and Mann-Whitney U test were used.

Results:

The FBG level decreased significantly and diabetes knowledge increased significantly in the intervention group compared to the control group. The FBG level and diabetes knowledge score improved significantly in the intervention group in all counties, but there were local variations in levels.

Conclusions:

The increased integration between the county level hospital and primary care service with an educational intervention among T2DM patients had a positive impact on the FBG level and diabetes knowledge score in the intervention group compared to the control group after one year. The results are suggesting that the care of diabetes in rural China may be improved through more intense collaboration between hospital care and primary care.

Key messages:

- The increased integration had a positive impact on the glycemic control and diabetes knowledge among T2DM patients.
- Diabetes care in rural China may be improved through increased collaboration between hospital care and primary care.

Implementing treatment guidelines for ambulance services in a low- and middle income setting

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Background:

The use of clinical practice guidelines in clinical and organizational decision-making improves the care of patients and patient safety. Guidelines make healthcare consistent and efficient. In many low- and middle income countries healthcare workers depend on guidelines developed in higher income countries. For these to be useful and accepted they need to be adapted to the local setting. The aim of the study was to implement pre-hospital treatment guidelines into an organization that was not currently using guidelines. The study was partnership between a Swedish pre-hospital training organization and local ambulance service organizations in Kosovo.

Methods:

An iterative process of implementing the guidelines was used:

- Identify guidelines appropriate for the local organization.
- In sets of five, have the guidelines translated into Albanian.
- Adapt the guidelines to the local conditions and context.
- Approval of guidelines by an expert group.
- Begin using the guidelines within the target organization.

Results:

The first set of five guidelines was translated, approved, and implemented into the organizations. To improve acceptance, both practitioners and decision-makers were involved in the process. Seven workshops were held, with a total of 104 participants. In follow-up discussions participants said they accepted the guidelines and that they would be useful in their daily work.

Conclusions:

It is important to evaluate to what extent the guidelines have been accepted, understood, and used. The success and acceptance is due to the flexible procedure managing the full implementation process. Adapting guidelines to fit with local needs and requirements using local experts made the guidelines accessible and useful. The workshop discussions established justification and approval.

Key messages:

- Involve local experts in contextualising guidelines to increase acceptance from the start.
- Support building a robust local implementation organization to assist and administer change.

Two-year supervised tooth brushing program evaluation in preschools in Southern Israel

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Background:

Dental care for children was included into National Health Insurance Law in 2010 and eligibility age went up gradually to 18 in 2019, providing universal dental care. As a part of dental care reform, community based preventive School Dental Services were extended to preschool children. School dental service (SDS), funded entirely by the State, was extended to younger ages providing supervised tooth brushing module. The national supervised teeth brushing program (STBP) was first implemented in 2015-2016 amongst 3-4 year old children attending 600 nurseries in Israel. Due to the program's success, it was gradually extended to more nurseries in low socio economic regions across the country, reaching 2200 settings in 2019.

The objective of this study was to assess dental health among preschool children participating in the program during the last two years, comparing to those who did not.

Methods:

Participant and non-participant kindergartens were randomly selected in Jewish and Bedouin Arab towns in the Southern district matched according to SES level. DMFT index measuring mean number of decayed, missing and filled teeth was recorded among preschool 5 years-old children.

Results:

283 children were examined, 157of them Jewish (86 participants in STBP, 71 non-participants) and 126 Bedouins (59 vs 67 respectively). Mean untreated carious teeth (d) was 1.15 vs 1.8 for Jews and 3.22 vs 3.9 for Bedouins. Percent of treated teeth within total caries experience index (f/dmf) was higher in tooth brushing group: 37% vs. 29% for Jews and 23% vs. 8% for Bedouins.

Key messages:

- Supervised tooth brushing shows favorable effect.
- Less carious teeth and more treated caries were recorded in STBP group.

Public Health Nurse and interprofessional collaboration related to adolescent mental health problems

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Background:

Mental health problems among adolescents account for a large portion of the global burden of disease and affect 10 - 20 % of children and adolescent worldwide. The public health nurse in the school health services is in the forefront for adolescents and play an important role in providing mental health. In order to identitfy and help the adolescents in secondary school with mental health problems the public health nurses are dependent on collaboration with other professionals. The aim of this study was to describe the variation in public health nurses perceptions of interprofessional collaboration related to mental health problems among adolescents in secondary school.

Methods:

This study has a qualitative design and individual interviews were analyzed with a phenomenographic approach. Eighteen public health nurses working in school health services, strategically selected from different counties, both urban and rural areas, were included to ensure variation in the phenomena.

Findings:

The analysis resulted in three descriptive categories: 'The formal structure has an impact on the interprofessional collaboration', 'The public health nurse is an important but not always self-evident partner in interprofessional collaboration' and 'The primary players are the teachers in collaborationń.

Conclusions:

The findings demonstrated that public health nurses are important but not always included in interprofessional collaboration and they were dependent especially of teachers to achieve good collaboration. There were variations in how public health nurses perceived interprofessional collaboration from school to school, which may give the adolescents with mental health different services. The knowledge from this study may be essential to strengthen public health nurses positions and presence in the school health service, which will benefit the adolescents with mental health problems.

Key messages:

- The public health nurse need to work actively to be included in interprofessional collaboration.
- The public health nurse are dependent on teachers and principals to achieve good collaboration.

The assessment of the functionality of public health specialists' activities in schools

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Background:

The role of public health specialists (PHS) working at schools is continually growing to assure better health behavior and disease prevention in adolescent age. The aim of the study: to evaluate the functionality of health care activities performed by PHS at schools.

Methods:

Anonymous survey of PHS was conducted in April 2018. Participants of the survey represent PHS working at schools in Lithuania. In total 179 forms where distributed, 139 were included into analysis, response rate - 77.7%. The data were analyzed by using $\chi 2$ criterion and the statistical significance p.

Results:

PHS stated that past 12 months, bullying was the least important problem for children, but according to the prior plans prevention programs for it were organized most often (40.3%) and sports activity program - least often (21.6%), even though it's the most relevant children health problem these days. 52.3% of PHS claims that schoolchildren learn the most about keeping good health from them. 44.6% of PHS noted that they aren't able to do all their responsibilities during working hours, because paperwork takes up most of their time, and too little time remains for communication with the school community. One in three thinks, that they provide services for too many schools, one in seven assumes, that they have excessive requirements. Those who have longer work experience and too much workload were more unsatisfied with work in comparison with those with less work experience and proper workload ($p < 0.05$). Ability to communicate, knowledge and initiative are marked as the most important features, whilst work experience - as the least important, to pursue required activities of PHS.

Conclusions:

Health improvement activities of PHS working at schools do not fully meet the most important health problems of schoolchildren. PHS with longer experience and higher workload indicated more problems regarding their work compared with those that have less work experience and accurate workload.

Key messages:
- The assessment of the opinion of school community's on the most important children's health issues should be analyzed prior to preparing health activities plans in municipality level.
- Workload of public health specialists working at schools should be optimized according to health activities plans.

Are general practitioners willing to deprescribe in oldest-old patients with polypharmacy?

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Managing the growing number of oldest-old patients with multimorbidity and polypharmacy in primary health care poses an increasing public health challenge. Since inappropriate polypharmacy can harm patients' health, general practitioners (GPs) should regularly review patients' medications and, if necessary, deprescribe. This case vignette study evaluates the deprescribing decisions of GPs from 31 countries and compares the factors influencing GPs' deprescribing decisions.

We invited GPs to participate in an online survey, containing a) three cases of increasingly dependent oldest-old multimorbid patients with potentially inappropriate polypharmacy and b) Likert-scale questions assessing the importance of factors influencing deprescribing. We presented each case with and without history of cardiovascular disease (CVD). For each case, we asked whether GPs would deprescribe any medication and, if so, which one(s). We calculated percentages of GPs deprescribing at least one medication in each case, compared cases with/without CVD history and different levels of dependency in activities of daily living, and calculated the percentage of factors rated as important or very important.

Of 3175 invited GPs from 31 countries, 53% responded (N = 1'706) with a mean age of 50 years and 60% females. Results are preliminary, but despite some differences across GP characteristics (male/female, age) and across countries, GPs generally showed a high willingness to deprescribe in oldest-old patients (>80 years) with polypharmacy. GPs were more likely to deprescribe in patients with a higher level of dependency, in the absence of history of CVD, and when patients are on statins, proton-pump inhibitors or potentially inappropriate pain medication. Factors GPs rated as important or very important for the deprescribing decision were patients' quality of life, risks and benefits of medications, patients' life expectancy, and potential negative health outcomes resulting from deprescribing.

Key messages:
- Despite international differences, most GPs report they would deprescribe in older multimorbid patients with polypharmacy.
- The results will facilitate the development of interventions supporting general practitioners to deprescribe.

How to engage French professionals to undertake social responsibility at a local level?

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Background:
In France, primary care is organised according to the principles of private practice: independent providers, payment by fee for service, freedom of settlement... Successive reforms have introduced more regulation i.e. gatekeeping role for GPs, better recognition of professional groups, new forms of payment and promotion of team work and multi-professional practices. Today, the concept of Health Territorial and Professional Communities (HTPC) is becoming a key element of health care reform encouraging primary care professionals to meet with specialists and social workers at a larger level than practice. HTPC should address issues such as access to services, coordination of care and promoting of preventive actions toward populations. This implies change in the roles, skills, methods and resources needed on both professional and regulatory sides. This study explores levers of the professional commitment in the HTPC and resources necessary for it.

Methods:
We conducted a qualitative multiple case study in three French regions. Data was collected from thirty semi-structured interviews with key national informants, regional regulators and health professionals themselves.

Results:
Professional commitment emerges at a local level on a territory defined by the collaboration practices and habits following a bottom-up process. The integration of care relies on the size of the HTPC which allows them to know each other and to work together to improve access to care and patient's disease management. In order to achieve that, professionals claim to have access to administrative health data and to be able to analyze it. They need to develop news skills in management and group animation. The function and training of coordination professionals appear to be essential.

Conclusions:
The professional commitment in HTPC relies on professional empowerment toward collective activities. This requires autonomy, skills and new roles both for professionals and regulatory authorities.

Key messages:
- French government relies on professionals' investment at the territorial level by implementing HTPC to guarantee access to care and respond to population needs in primary care.
- HTPC implementation implies radical change for the professionals to undertake social and populational responsibility for which public health professionals should help to meet the challenge.

Impact of an intervention to activate unemployed people on the use of primary health care services

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Background:
Promoting well-being and health is a key policy instrument in municipalities. There are many ways to support the work ability of long-term unemployed people. Short term subsidized employment (300-500 €/person/month) being one widely used measure. The purpose was to study what kind of influence a short term employment has on the use of social and health care services of long-term unemployed people in sparsely populated area. Specifically, the aim was to investigate the use of primary health care services among people in subsidized employment, intervention (n = 67) and control group (n = 85) during five years period (2012-2016).

Methods:
Individual-level data were extracted from registers (age: 19-65 years old, gender: 61 % men, 39 % woman, N = 152). The use of primary health care was examined in the case study by means of annual averages, cumulative percentages and regression analysis.

Results:

According to preliminary results, there were differences in the prevalence of primary health care services use and how the use of services changed among intervention and control groups. The use of services in intervention group increased until the end of the intervention year, but decreased in the following year, 2016. The use of services in control group increased until 2016. Regression analysis was carried out to study the change; a year and an intervention for 2014-2016 were made as a predictor. It was found out that the number of visits increased each year by looking at both groups together (p = 0.012). The subsidized employment that started in 2014 had a statistically significant reducing effect on the use of services (p = 0.034) in intervention group in 2014-2016.

Conclusions:

Municipalities' health promotion and subsidized employment work can have positive impact on disadvantaged groups such as long-term unemployed people in sparsely populated area. Creating data for the use of services from local registers was very time consuming and challenging process, but possible.

Key messages:

- Promoting well-being and health is a key policy instrument in municipalities.
- Municipalities' health promotion and subsidized employment work can have positive impact on disadvantaged groups such as long-term unemployed people in sparsely populated area.

Can clinical coordination be improved through Participatory Action Research (PAR) interventions?

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Background:

Despite the effectiveness of Participatory Action Research (PAR) in reducing the gap between evidence and practice, its use to improve care integration is rare. The aim is to analyze the factors influencing the implementation of PAR interventions to improve clinical coordination in public health services networks of Brazil, Chile, Colombia, Mexico and Uruguay.

Methods:

A qualitative, descriptive-interpretative study was conducted in participating healthcare networks of each country. Focus groups and individual semi-structured interviews were conducted to a criteria sample of participants: members of Local Steering Committee (LSC)(29), professionals' platform (PP)(28), other professionals (49) and managers(28). Thematic content analysis was performed, segmented by country and themes.

Results:

Findings reveal that contextual factors, the PAR process and interventions' content were determinants in the implementation, interacting over time, and differing among experiences. On the one hand, institutional support (providing the necessary resources) together with the interest of professionals and managers in participating, emerged as influencing factors influenced by other factors related to: the system (alignment with policies; electoral cycle), networks (lack of time due to work overload; precarious employment conditions) and individuals (limited mutual knowledge and mistrust). On the other, some characteristics of the PAR process facilitated institutional support and motivation: professionals' participation in all activities, design flexibility and shared decision-making - also present when interventions were based on mutual adjustment - the LSC's leadership and the facilitating role of the research team.

Conclusions:

Evidence is provided that when some contextual elements converge the implementation of interventions through PAR processes can turn into a factor of motivation and cohesion, determinant for the adoption of clinical coordination interventions.

Key messages:

- Contributes to fill the knowledge gap in factors influencing the implementation of PAR interventions in healthcare.
- Provides a framework for analysis and recommendations for their implementation.

Intervention on knowledge and perception of hand hygiene among healthcare workers

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Background:

Many studies conducted in healthcare settings with limited resources reported healthcare associated infections (HAIs) rates higher than in developed countries. Hand hygiene is considered as the most effective procedure for reducing infection in a wide variety of settings. The aim of this study was to assess the effectiveness of an intervention program to improve knowledge and perception of hand hygiene among healthcare workers (HCWs).

Methods:

We conducted a prospective before-and-after study design in university hospital Sahloul, Sousse, Tunisia, from January 2015 to December 2016. The same questionnaire, constructed by the WHO was distributed and collected at HCWs' workplace.

Results:

A total of 149 and 146 HCWs were enrolled, respectively at pre and post intervention. The majority was nursed women aged between 20 and 35 in pre intervention, whereas in post intervention the majority where physicians. Globally, our results showed tendencies toward improvement, but only two items were significant: the HW is the appropriate technique after injury (73.5% vs 86.8%; p = 0.006) and the hands of HCWs are the lead vehicle of HAIs (65.1% vs 83.6%; p = 0.01). On the other hand, judging by the HCWs' responses, the probably most effective intervention to enhance hand hygiene compliance was that an alcohol-based hand-rub is available at each point of patient care. In contrast, empowering patients to remind HCWs to perform hand hygiene was mostly rated to be the least effective intervention both in pre and post intervention.

Conclusions:

Our intervention to positively influence hand hygiene knowledge was unfortunately less effective than we had hoped it would be, which suggests a HCWs' reluctance to attend the training program.

Key messages:

- Hand hygiene is considered as the most effective procedure for reducing nosocomial infection.
- the intervention to positively influence hand hygiene knowledge was effective.

Assessment of unmet needs and barriers to end-of-life care provision in Kazakhstan

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Introduction:

Palliative care, a holistic multidisciplinary approach for those persons with terminal diseases, providing relief for physical, emotional, psychosocial and spiritual suffering of both the patients and their families and to support the dignity of all involved in the process of dying. The purpose of this qualitative research project is to identify the barriers for end-of-life care provision in Kazakhstan and to provide recommendations on how to integrate and assure high quality palliative care for patients within the cultural context of Kazakhstan.

Methods:

Our proposed research project employed qualitative research methods, including semi-structured in-depth interviews using grounded theory. We conducted purposive recruiting with content analysis and semi-structured interviews until saturation was achieved. The interviews have been conducted at the University Medical Center (UMC) teaching hospitals, including National Research Center for Maternal and Child Health and the National Children's Rehabilitation Center. The total number of participants were 65 individuals, of whom 26 were medical doctors, 20 nurses, 7 speech therapists, 6 psychologists, 4 educators and 2 social workers. All participants had experience working with terminally ill patients, family members, and caregivers. The data was then translated into English. Analysis of the interview data have been performed by using the computer assisted software analysis package - NVivo. Institutional review board (IRB) approval of the Nazarbayev University has been received, assuring informed consent and confidentiality safeguards in the research.

Results:

The study findings indicate the evidence of growing demand in training of healthcare professionals, inadequate provision of pain relief and lack of public awareness about palliation as primary obstacles for palliative care development in Kazakhstan.

Key messages:

- The findings of the study are very important to help stakeholders to focus on the development of training opportunities for palliative care specialists.
- The results of the study help to develop milestones and concrete strategy for integration of palliative care services into the national healthcare system of Kazakhstan.

Does case management provides support for staff facing frequent users of emergency departments?

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Background:

Frequent users of emergency departments (FUED; 5 ED visits during the preceding 12 months) account for a disproportionate part of ED visits, causing a wide range of work difficulties to ED staff potentially leading to FUED discrimination. Whereas case management (CM) tailored to FUED leads to a reduction in ED visits, CM impact on ED staff has not been explored yet. This study aimed to compare ED staff perceptions of FUED with and without dedicated CM support.

Methods:

Participants (N = 253) were ED staff (81 physicians; 172 nurses/assistant nurses) of two Swiss university hospitals, one with CM and one without CM support. Perceptions regarding FUED (i.e., knowledge and awareness of the issue extent; related work difficulties; FUEDs' legitimate use of ED resources) were measured with a 25-item online survey (4 to 10-level Likert scales). Multivariable regression analyses were conducted to 1) explore the associations between CM implementation and FUED perceptions, and 2) test the moderating effect of profession (physician or nurse/nurse assistant) on these associations. All analyses were adjusted by gender and years of practical experience.

Results:

Physicians with CM considered FUED as a less important problem (= .375, R2 = .11, p <.05) and rated their knowledge of FUED issue higher (= .245, R2 = .077, p <.05) compared to those without CM. In contrast, nurses without CM perceived fewer FUED-related work difficulties (i.e., feeling of failure and helplessness) than nurses with CM. (= -1.01, R2 = .06, p <.05) No significant difference was found regarding ED staff's perceptions of FUEDs' legitimate use of ED resources and frequentation, nor on nurses' knowledge of the issue.

Conclusions:

These results suggest that CM intervention for FUED is a potential source of support for ED physicians working with FUED. Further qualitative research is needed to explore why nurses without CM support reported feeling less failure and helplessness regarding FUED.

Key messages:

- By highlighting a different impact of CM on nurses' perception, this study illustrates where CM intervention might be improved.
- This study supports CM as a promising intervention for FUED by potentially having a positive impact on ED physicians' perception besides the one previously proved on FUEDs' number of visits and QOL.

Future Physicians and Cosmetic Medical Interventions

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Background:

International Union of Aesthetic Plastic Surgeons' survey-2017 showed Turkey is the second country among others in terms of numbers of cosmetic medical interventions (CMI) in Europe and ranks ninth worldwide. Therefore future physicians' (FT) perceptions are important on this topic as potential implementer and service user.

Objective:

Objectives are: To examine FPs (interns) personal CMI experience; practiced/observed CMI; their attitude towards CMI and related factors.

Methods:

Study is descriptive with 274 interns. Data collected by online survey contains 22 questions and acceptance of cosmetic surgery scale (ACSS) (Henderson and King, 2005).

Findings:

Of the interns, 51.5% were female; 47.8% perceived good economic status; 40.5% had cosmetic-surgery training; 23.0% had CMI (laser on skin and teeth interventions mostly); 39.7% of these interventions were performed in private clinics while some of them are realized in beauty centers; body-perception was found (75.5%) the main motive of CMI. There was a strong relation between CMI and gender. Female interns constituted majority (p = 0.01). Respondents who had CMI had the highest scores of ACSS ($p < 0{,}001$). It was found that ACSS is positively related to positive familial and social environment (p = 0,007); negatively related with strong traditional (p = 0,005) and religious beliefs ($p < 0{,}001$); positively related with the given importance of body-perception (p = 0,015). Media effect was found important factor on ACSS scores ($p < 0{,}001$).

Conclusions:
If the awareness of the quality, results, benefits and harms of CMIs is well established, it may be thought that there will be differences in attitude scale and less CMI performance. Therefore, it is necessary to constitute training programs on the different aspects of CMIs in medical curriculum.

Key messages:

- CMIs are not medically necessary and not a public-health issue and has economic burden.
- Awareness on the quality, results, benefits and harms of CMIs is should be well-clarified in the society.

Evaluation of minimum standards for communal catering in Styrian nursing homes

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Background:
Nutritional standards in community catering facilities are essential for adequate quality of care. As part of the initiative GEMEINSAM G'SUND GENIESSEN of the Health Fund Styria, minimum standards for nursing homes were published. The aim was to investigate the current situation of the implementation of selected minimum standards for food and drink supply in Styrian nursing homes to create appropriate measures for healthy living for elderly people.

Methodology:
Of 81 defined minimum standards, two thirds were examined in the study (n = 54; 66.6 %). To get detailed insights into the current degree of implementation, the project team worked with a mixed- methods-basis, consisting of an online survey (n = 94; 41.4% of all Styrian nursing homes), 46 guideline interviews and 169 weeks of menu analysis.

Results:
Of the 54 minimum standards analysed, 34 were fulfilled (63.0%), nine were rather fulfilled (16.6%), five were rather not fulfilled (9.2%), four standards could not be fulfilled (7.4%) and two standards could not be investigated (3.7%). Nursing homes prefer seasonal and regional products, but pay less attention to the use of fair trade products or organic food. In addition, the food choice is determined by the preferences and acceptance of the residents, which are the main reasons for the low use of whole grain products and the rare offer of vegetarian dishes. With regard to the design of the menus, almost all plans are age-appropriate and attractively presented, but rarely meet the standard with regard to recommended labelling (e.g. alcohol aromas). Challenges in the daily practise are finding a way between the self-determination of the residents, the arranged diets as wells as meeting the minimum standards.

Conclusions:
Results indicate that minimum standards in nursing homes are taken into account. In order to achieve a comprehensive implementation, further development of the standards as well as information and awareness-building interventions are needed.

Key messages:

- Challenges in the daily practise are finding a way between the self-determination of the residents, the arranged diets as wells as meeting the minimum standards.
- The range of vegetarian dishes, dishes with legumes and wholemeal products should be focused in the future. In addition, the provision of tools (age-and target-group-specific-menus) is recommended.

Waiting times in cardiology and quality of care: analysis of performances in an Italian hospital

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Background:
The identification of diseases in an early stage is essential to improve prognosis and survival of patients. Consequently, waiting times for cardiological performances are widely recognized in Europe as evaluation items for healthcare quality. Our study aims to analyse waiting times of the main procedures in the cardiology ward of a huge hospital of Northern Italy and to compare them with the regional benchmark.

Methods:
Data of the cardiology ward of "Molinette" hospital (Turin, Italy) about the waiting times for clinical procedures in the period 2016-2017 were collected. In particular, we gathered number of health care services and mean waiting times (MWT) for "Echocardiography" (EC), "First Cardiological Visit" (FCV), "Holter ECG" (HECG), "Percutaneous Transluminal Coronary Angioplasty performed within 2 days for people with myocardial infarction" (PTCA). We compared then our results with the benchmarks identified by the regional law.

Results:
In the period considered, in "Molinette" hospital 11,565 ECs were performed, with a MWT of 31 days in 2016 and 16 days in 2017, well below the benchmark (40 days). The total number of FCVs was 5,156 with a MWT of 18 and 13 days in 2016 and 2017 respectively, again under the benchmark (30 days). The HECGs were 3,805, with a MWT of 53 (2016) and 32 (2017) days (benchmark 40 days). PTCAs performed within 2 days (benchmark 85%) were 160 (77.7%) in 2016 and 138 (85.2%) in 2017.

Discussion:
In 2017, the waiting times of "Molinette" hospital were inferior to the regional benchmarks, for all the cardiological procedures considered. Shorter MWTs allow a more rapid planning of further diagnostic tests and treatments and, therefore, a consequent better quality of care. It's important for European hospitals to assess and compare these indicators in order to guarantee a fast and appropriate care to their patients.

Key messages:

- Waiting times are an indicator of early diagnosis and treatment and are useful to assess the quickness and quality of health care provided in European hospitals.
- Cardiological procedures in "Molinette" hospital of Turin are provided with waiting times shorter than benchmarks. It would be interesting to compare these results with other big European hospitals.

Using routine data to benchmark quality and outcomes of diabetes care in the EU HEALTHPROS project

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Background:
The EU-funded Marie Curie project HEALTHPROS aims to foster a new generation of "Healthcare Performance Intelligence Professionals" through a cohesive stream of 13 doctoral projects (www.healthpros-h2020.eu). Over 48 months, researchers will investigate key levers of healthcare improvement in 7 different countries, using methods drawn

from the diverse fields of biostatistics, medical informatics and health services research.

Objectives:

To describe barriers and enablers in the conduction of two doctoral projects aimed at exploring the impact of personal risk factors and organizational arrangements on lower extremity amputations in diabetes, through the use of large-scale databases from England, Scotland, Denmark and Germany.

Results:

The research plan included a systematic review, structured comparison of data sources, predictive modelling and software development for automated international comparisons. Barriers encountered by researchers were: knowledge and access to data sources from different countries, dealing with data protection rules and the ability to carry out international comparisons when individual records are not easily allowed to leave national boundaries. Enabling factors included: a targeted educational process for risk modelling in diabetes and a multidisciplinary support team to help doctoral students overcoming the above barriers across different sites. Further clinical insight and contextual knowledge of data systems in place at different locations were needed in addition to the statistical, epidemiological and technical skills initially foreseen by the program.

Conclusions:

The success of studies within a general educational program on health systems performance may depend from the continued support of a multidisciplinary team helping students in their educational process as well as with the practicalities of their research. International comparisons using routine data may require prioritisation to meet the tight timelines of doctoral theses.

Key messages:

- Academic programs for international comparisons in health care may be hampered by different type of barriers including technical aspects, legal regulations and a range of contextual factors.
- The establishment of multidisciplinary support teams may be essential for training doctoral students aiming to conduct international comparisons using routine data.

Accessibility of early diagnostics for children with a developmental disorder in Flanders, Belgium

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Background:

20% of all children suffer a neurodevelopmental delay or disorder (NDDD) worldwide. Early multidisciplinary diagnostics, early intervention and timely diagnostics along the rehabilitation trajectory are needed to improve the child's functioning and participation. In Flanders, Belgium, 6 types of public organizations (164 service points in the region) offer multidisciplinary diagnostics of NDDD for children. However the objective of timely diagnostics for the population is not realized.

Methods:

A qualitative thematic analysis identifies the criteria of Federal and Flanders' regulations for publicly accredited and funded organizations providing multidisciplinary diagnostics for children with (suspected) NDDD. A survey was sent in different settings on waiting periods and perceived determinants hampering early diagnostics These results were discussed and validated by experts in focus groups.

Results:

Average waiting times for diagnostics run up to 1 year before a diagnostic trajectory can be started. Regional differences occur in the availability of diagnostic services. Formal regulations hamper the development of collaborative networks and an integrated health services model offering accessible diagnostics along NDDD trajectories. The field lacks public health services strategies to provide accessible, efficient and effective diagnostics for a complex range of NDDD target groups

Conclusions:

Coordination of services providing multidisciplinary diagnostics for children with (suspected) NDDD is needed. A health services approach supporting mandated regional networks will improve the accessibility of early and timely diagnostics.

Key messages:

- Development of collaborative networks of different types of services offering diagnostics will improve the accessibility of early and timely multidisciplinary diagnostics for children with NDDD.
- Better accessibility to multidisciplinary diagnostics will improve long term outcome for children with NDDD.

Mergers of primary care organizations: a systematic review of the literature

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Background:

Mergers as large-scale collaborations in primary care organizations have become a commonplace in developed countries to offer economies of scale and more efficient delivery of care to population. The aim of this systematic review is to summarize the scientific evidence on the relationship between the increase in the size of organizations providing primary care services and their performance.

Methods:

The PICO model was adopted and three electronic databases (Medline, Scopus, ISI Web of Knowledge) were searched using appropriate keywords. Screening by title and abstract and data extraction were performed by two independent investigators. Articles, written in English, evaluating the performance after increasing the size of an organization were included. Selected articles were assessed for quality and risk of bias using the National Institutes of Health Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies. Process and outcome quality indicators were used for evaluation.

Results:

From a total of 1337, 12 studies met the inclusion criteria and 103 indicators were identified: 59.2% did not show any variation, 33.9% improved significantly after the merger, 6.9% worsened after the merger. In particular, diabetes care did not show any statistically significant variation in 40.0 % of the indicators, while 10.0 % showed an improvement and 10.0% a worsening in clinical outcomes. A significant negative association was found between practice list size and reported non-urgent or urgent doctors' availability ($P < 0.05$, both). The process of merging also created perceptions of takeover and had a negative effect on staff.

Conclusions:

The effects of mergers are conflicting and there is little evidence that the performance is associated with the size of the structures involved. Assessment on the impact of primary care mergers should to be related to the population needs and the context where these processes are carried out.

Key messages:

- Merging processes may lead to contrasting results.
- To assess periodically and systematically the impact of mergers in a continuous quality improvement cycle.

Keeping up with the codes; accounting for quality in cancer patient pathways (CPPs) in Norway

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Background:

Standardised cancer patient pathways (CPPs) were introduced in Norway in 2015. CPPs are national standardised patient pathways which are discipline- and target-based (28 cancer diagnoses), aiming to minimize waiting times and make cancer care more predictable and secure for patients. One important part of the CPPs are different codes aimed at measuring time in the different phases of the pathway. These codes are reported to the Norwegian directorate for health and are made public on a national web site. On the basis of these reports hospitals across the country can be compared regarding compliance to timescales. From a political and bureaucratic level, the codes are seen as signs of quality, and hence very important.

Methods:

In this paper, we present preliminary results from a project which is evaluating the introduction of CPPs. Based on interviews with administrative staff responsible for coding and with other health personnel (physicians, nurses, clerical workers and managers) in different hospitals, we present experiences with and perceptions of coding practices.

Results:

We find that even though the coding manual is presented as a universal tool implying standardised coding practices, there is a multitude of coding practices (which makes comparison between hospitals challenging). The coding represents a massive bureaucratic workload for the dedicated staff, raising concerns if their time is spent on the most important issues.

Conclusions:

The codes are seen as timescales set according to logistics and not according to what is medically safe - and some of the health personnel argue that these timescales have nothing to do with quality. However, they still recognize that keeping the timescales might be important for the patient experience.

Key messages:

- Standardised coding are often not standardised, but contains a multitude of practices.
- These practices need to be explored in order to understand if and how codes can be seen as signs of quality.

Nursing processes analysis in district hospital in Lithuania

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Background:

The aim of the study - to evaluate the time devoted to the activities of therapeutic profile nursing and wastes in the nursing processes.

Methods:

Time-and-motion study was applied for investigation of clinical workflow in nursing at district hospital in neurology and internal medicine departments. A total of four nurses, two nurses from each department, were observed. Duration of observation was 2 940 minutes (49 hrs).

Results:

Nurses devote most of their time to administering medicines. It has been noted that there are many additional, unnecessary actions in this process. Likewise nursing staff devotes a lot of time to documentation management work: refills the same dossier when the information is recorded in paper forms, and then transfer it to the computers. For communication with patients, nursing staff spend a very small part of their working time and it is due to insufficient staff and stress and fatigue of the nurses. It is observed that the nurses of neurology and internal medicine departments spent 50.3 percent of their working time for a direct patient care, 19.3 percent of time - for indirect patient care, 22.3 percent for personal time and 8.0 percent for unit-related functions. According to the Lean methodology waste of overproduction, waiting, defects, bureaucracy, transportation, motion and human potential were identified in these departments.

Conclusions:

Nurses of neurology and internal medicine departments spend most of their time for direct patient care and the least of their time for unit-related duties. Seven out of eight types of waste prevails in therapeutic departments of the district hospital.

Key messages:

- Adaptation of the Lean methodology of 'Visual Management' may aid for optimizing the process of medication administration and diminishing the paper work of nurses.
- The manifestation of the stress and fatigue of the nurses could be reduced if the workloads of nurses were adjusted and adequately distributed.

Reasons for cervical cancer screening participation among Turkish- and Moroccan-Dutch: focus groups

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Background:

Cervical cancer (CC) is ranked fourth most frequently diagnosed cancer in women worldwide. Compared to the 79% CC screening participation rate of native Dutch women, the rate of 64% among Turkish- and 53% among Moroccan-Dutch women is considerably lower. Our aim was to explore reasons for CC screening (non)participation of Turkish- and Moroccan-Dutch women, and their attitude towards self-sampling.

Methods:

Six focus groups were conducted in March and April 2019 with Turkish (n = 25) and Moroccan (n = 20) women in the Netherlands, aged 30-60 years. Questions were based on an extended Health Belief Model. Discussions were transcribed verbatim and thematically analysed.

Results:

We found that women lack knowledge and awareness about CC. Barriers for screening were lack of a good command of the Dutch language, having a male as general practitioner, fatalism, shame and taboo related to the intimate procedure, and the association of CC with lack of femininity and infertility. Other barriers were fears of the test result, cancer, suffering, death, and leaving their children behind after death. Facilitators were perceived severity of disease, social support, and short procedure time. Additional religious facilitators included the responsibility to take care of one's own health using medical facilities that God provided. Differences were found between Turkish and Moroccan women, such as lack of a good command of the Dutch language. Conflicting attitudes were found regarding self-sampling. Although perceived easy and accessible, women were hesitant whether they could sample correctly. Overall, women preferred a physician-taken smear to a self-sample.

Conclusions:

Several barriers and facilitators for CC screening participation were identified that can be used to design tailored information materials. Women's doubts about incorrect self-sampling should be taken into account to encourage self-sampling among nonparticipating Turkish and Moroccan women.

Key messages:

- Important barriers and facilitators were identified that can be used to well-inform Turkish and Moroccan women.
- To promote self-sampling, women's attitudes on their self-efficacy should be explored.

Waiting times for diagnosis and surgery in a large obstetric-gynecological hospital in Italy

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Issue:

Diagnostic testing and surgical waiting times are related to quality of healthcare services. An extension of waiting times, indeed, could lead to a diagnostic or therapeutic delay, with potential consequences on patient health outcomes. Several policies have been implemented in different European countries in order to improve these indicators. Our study aims to analyse the waiting times of the largest obstetric and gynaecological hospital of Northern Italy, in order to identify potential issues in women's health services.

Description of the problem:

Data of "Sant'Anna Hospital" (Turin, Italy) about the waiting times in the period 2016-2017 for outpatient and surgical services addressed to women were collected. Specifically, number of health care procedures and mean waiting times (MWT) for "Obstetric-Gynaecological Echography" (OGE), "First Endocrinological Visit" (FEV), "First Gynaecological Visit" (FGV), "Surgical Intervention for Breast Cancer" (SIBC) and "Surgical Intervention for Uterus Cancer" (SIUC) were retrieved. Results were compared with the benchmark identified by the regional law.

Results:

A total of 21,735 OGEs were performed, with a MWT of 3 days in 2016 and 5 days in 2017, below the benchmark (11 days). The total number of FEVs was 1,234, with a MWT of 19 and 23 days in 2016 and 2017 respectively, again below the benchmark (30 days). The FGVs were 21,096 with a MWT of 9 (2016) and 24 (2017) days (benchmark 30 days). The number of SIBCs (N = 89) performed within 30 days (benchmark) were 87 (98% of SIBCs), while SIUCs (N = 90) were 84 (93%).

Lessons:

The waiting times of the "Sant'Anna hospital" were, for all the performances considered, shorter than the regional benchmarks. This is an indicator of the quickness of diagnosis and treatment and, indirectly, of the quality of care. An international comparison among the main European hospitals should be encouraged in a perspective of continuous improvement of health care provided to European citizens.

Key messages:

- Diagnostic testing and surgical waiting times are useful to assess the quickness and quality of health care provided in European hospitals.
- "Sant'Anna hospital", leader for women's health care, provides care with waiting times shorter than benchmarks. It would be interesting to compare its results with other large European hospitals.

Inequalities in the utilisation of primary and specialist physicians in Europe - a systematic review

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Background:

The evidence on inequalities in health clearly shows that people with lower socioeconomic status (SES) have poorer health and higher mortality. Nevertheless, generalized evidence for inequalities in healthcare is lacking. So far, the international literature was only summarised with regard to inequalities in the utilisation of disease-specific treatment. Therefore, our aim was to synthetize the literature on socioeconomic inequalities in the utilisation of primary and specialist physicians in the general population.

Methods:

This systematic review searched Medline und Web of Science from 2004 to 2018. Articles that reported quantitative data on the association of SES with utilisation of primary or specialist physicians in Europe were included. Title and abstract screening were performed by two independent researchers and 50 full texts are currently sifted whether they fulfil the inclusion criteria.

Results:

The studies analysed utilisation of physicians in terms of probability or frequency. The initial check of the studies indicates that socioeconomic inequalities in the utilisation of physicians differ between primary and specialist care. Specialist physicians were found to be visited with a higher probability and more often by the least disadvantaged in most studies. Inequalities in the utilisation of primary physicians revealed to be more diverse with a weak pattern of equally distributed probability of GP visits and more frequent utilisation by the disadvantaged.

Conclusions:

The preliminary results indicate that pro-rich utilisation seems to be more pronounced in visiting specialists compared to primary health care. Aiming to reduce inequalities in healthcare, public health actions might primarily focus on reaching a needs-based consultation of specialist physicians.

Key messages:

- Socioeconomic inequalities in the utilisation of physicians exist and differ between primary and specialist care.
- Inequalities to the disadvantage of the population with low SES are more pronounced in the utilisation of specialists compared to general practitioners.

Compliance with smoke-free policy at tuberculosis facilities in Armenia: a mixed-methods study

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Background:

Smoke-free environments in tuberculosis (TB) facilities promote a tobacco-free lifestyle among patients and healthcare providers and advance their healthy image. Though the national law of Armenia prohibits indoor smoking in healthcare facilities, enforcement of the law is still insufficient. This study aimed to explore compliance with the smoke-free policy in TB facilities in Armenia.

Methods:

An exploratory sequential mixed-methods study was conducted. Overall 21 TB physicians and five key informants in the field of TB and tobacco control participated in qualitative interviews. To further quantify and validate the findings, structured observations of smoke-free policy implementation were conducted in 36 facilities.

Results:

All physicians expressed a positive attitude towards the smoke-free environment and were satisfied with the level of implementation of a smoke-free policy in their TB facilities. According to the respondents, they already have smoke-free environments established in their facilities. ''No smoking'' signs, warnings about health consequences and financial penalties, and pictures of damaged lungs were the most common measures against indoor smoking. However, only in 17.1% (n = 6) and 8.6% (n = 3) of observed TB facilities there were posted ''No smoking'' signs and financial penalties, respectively. In 5.7% (n = 2) of facilities, the research team found ashtrays inside the building, and in 20.0% (n = 7) of facilities, there were smoking patients, physicians, and visitors.

Conclusions:

While the qualitative study indicated good compliance, the quantitative findings were controversial with this regard. In fact, in most of the facilities, the smoke-free policy was not properly implemented and enforced. Additional efforts are needed to harmonize the current practices with national policies and recommendations.

Key messages:

- There was a discrepancy between practices reported by physicians and the actual observed compliance.
- Further interventions are needed to ensure 100% compliance with smoke-free policy in TB healthcare facilities.

A qualitative study on cancer patientś experiences with financial burden and financial distress

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Background:

Financial toxicity was hardly examined in the context of public health. It is proven that financial distress following a cancer diagnosis can have an impact on the quality of life and mortality. Additionally, it was found that subjective indicators of financial toxicity have a stronger effect than objective indicators. Nevertheless, less is known about how higher costs can impact on the individual patient's well-being. The aim of this study was to analyse the major drivers that lead from financial consequences to subjective financial distress in a country with statutory health insurance.

Methods:

Qualitative semi-structured interviews were conducted with 39 cancer patients, aged between 40 and 86 years, in Germany. Inductive content analysis of data was performed and the individual patient's pathways are recently compared and contrasted.

Results:

Above all, we found that financial distress is not only induced by higher costs and lower available money. Moreover, independently of whether patients experienced any financial decline, they experienced making financial adjustments and feeling financially stressed. The preliminary results show that the patient's ability of good money management and trust in one's own skills being able to get along with less money might predict psychosocial consequences.

Conclusions:

Screening instruments for financial toxicity are important to effectively detect patients whose quality of life might be worsened by their financial situation. It might be that rather financial skills than the amount of costs are important indicators of financial distress.

Key messages:

- Even cancer patients experiencing almost no financial decline during the period of cancer treatment might experience lower quality of life caused by financial distress.
- The ability and trust in oneself money management might have the strongest impact on subjective financial stress.

Genetic services for Hereditary Cancer: a systematic review of Patient Reported Outcomes studies

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Background:

Genetic services for Hereditary Breast and Ovarian Cancer (HBOC) have become part of clinical and public health practice. Nevertheless, the evaluation of such services, including genetic testing and counseling, is challenging as they rarely affect health status measures (e.g. mortality and morbidity). A possible way is using Patient Reported Outcomes (PROs) i.e. subjective reports coming from patients, directly attributable to genetic services. We performed a systematic review to explore the use of PROs in HBOC genetic services.

Methods:

We searched Pubmed, Scopus, and ISI Web of Knowledge for observational studies using PROs to assess standard genetic counseling (i.e. in person and individual) for HBOC.

Results:

We identified ten surveys from various countries (USA n = 5; Europa n = 6), published between 2000 and 2018 and mainly conducted in Teaching hospitals and Cancer Research and Treatment Institutes (n = 9). The majority assessed pre-test counseling (n = 6) with diagnostic or predictive purpose. The most frequently measured outcomes were patient satisfaction (n = 9), adherence to recommended interventions (n = 3), information sharing with relatives (n = 3); disease risk perception (n = 2), and psychosocial distress (n = 2). Six studies adopted standardized PROs collection tools: the most common were the Genetic Counseling Satisfaction Scale and the Hospital Anxiety and Depression Scale. Questionnaires were mainly administered by post, soon after genetic counseling or up to seven years later. Overall, patients seem satisfied with genetic counseling. Nevertheless, more attention to the psycho-social aspects of genetic testing is needed.

Conclusions:

PROs are very promising for the assessment of HBOC genetic services. Their routine use could provide important elements to improve the quality and the patient-centeredness of genetic services. Emerging information and communication technologies will help this process by making it easier collecting patient data.

Key messages:

- Precision medicine, where medical decisions are tailored to an individual's characteristics, including the patient's genetic profile, is becoming a paradigm for chronic diseases, particularly cancer.
- PROs are expected to be increasingly used as a measure of performance in order to drive the changes in how clinical genetic services, and healthcare in general, are organized, delivered and founded.

Paying attention to personnel in organizational changes: the impact of hospital mergers

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Background:

The importance of paying attention to personnel satisfaction for the well-being of an organization is clearly stated also in healthcare organization. The trend of mergers of healthcare organizations represents an evident case of organizational change that could undermine personnel satisfaction if not adequately managed. The aim of our study was to investigate the impact of hospital merger on personnel perceptions and satisfaction.

Methods:

A systematic review of the literature was carried out by querying scientific databases and grey literature. A search string was built using keywords including: merger, healthcare, personnel, satisfaction and synonyms. Inclusion criteria were primary studies reporting the outcome of interest and set in hospitals that has undergone a merger. Studies characteristics such country setting, design and time frame of the study, number and role of personnel interviewed and main findings were extracted and narratively synthesized.

Results:

Search resulted in 3662 studies of which 9 were finally included in the analysis. Studies were mainly represented by post-merger qualitative research (77.8%) of which 55.6% semi and 54.4% structured interviews. Sample size ranged from 14 to 3119 and was represented by unspecified employees (55.6%), nurses and hospital executives (22.2% both). Findings showed that hospital executives consider merger positively especially regarding increased negotiation skills and costs reduction. Conversely, the other personnel mainly expressed critical issues as differences in organization of hospitals merged, goals and confirmation uncertainty, communication impairment and especially no involvement in follow-up in the post-merger phase.

Conclusions:

The merger process strongly impacts healthcare personnel satisfaction, depending on the role played in the organization. If an initial enthusiasm and staff engagement in pre-merger phase is seen, this is not generally followed by their proper involvement over time.

Key messages:

- As personnel satisfaction and perceptions are strongly related to healthcare quality, they represent a central point in the merger process of healthcare organization.
- More attention must be paid to follow-up staff satisfaction after the merger in a continuous staff engagement to ensure the success of merger process as well as that of all organizational changes.

Obstetrical complications treated in the maternities of the region of Sousse (Tunisia)

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Background:

About 800 women die each day worldwide due to complications related to pregnancy, childbirth or in the postpartum period. The objective of this study was to describe the activity of the public maternities in the Governorate of Sousse (Tunisia) and to identify obstetrical complications treated in these facilities.

Methods:

A cross sectional study of all public health facilities, which performed deliveries in Sousse was conducted in 2017 (Five maternities: one University maternity and four peripheral ones). Data were collected by reviewing clinical records and registers of these maternities for the year 2016.

Results:

In total, in the health visited structures, there were 13427 deliveries in 2016, the majority of them (78.8%) took place at the university maternity of Farhat Hached hospital. Of these deliveries, 3397 were performed by caesareans (25.3%). In 2016, there were three maternal deaths and 69 very early neonatal deaths. There were 2036 direct obstetric complications treated in the five maternities visited. The most frequently encountered direct complications were: 'obstructed/prolonged labor' (41.21%), 'severe pre-eclampsia/eclampsia' (19.5%) and 'ante and postpartum haemorrhage' (15.18%). The most encountered indirect obstetrical complications were: gestational diabetes and anaemia.

Conclusions:

The reduction of maternal and neonatal mortality requires the existence of a functioning basic health care system that provides all pregnant women and their newborns with timely access to skilled care, particularly when a complication occurs. The provision of this qualified care requires also the presence of qualified personnel working in a suitable professional environment.

Key messages:

- The majority of obstetrical complications occur in university maternity and this is due to excessive references from peripheral maternities.
- Peripheral maternities need to be strengthened with material and human resources.

Time trends of primary care quality across Portuguese regions: using prevention quality indicators

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Background:

Primary care quality is one of the main dimensions of primary care performance and can be evaluated by several methods, e.g. studying hospitalizations for conditions that could be treated, or less severe, if appropriately managed in primary care. Accordingly, the Agency for Healthcare Research and Quality (AHRQ) developed prevention quality indicators (PQIs). In this study, we aimed to compare PQIs and their time trends across Portuguese regions.

Methods:

We performed a retrospective study, using all adult public hospital discharges in mainland Portugal, between 2011 and 2015. PQI rates for the overall (PQI 90) and composite indicators (i.e. 91 - acute, 92 - chronic, 93 - diabetes) were computed using AHRQ specifications. These rates were compared between the 5 Portuguese NUTS 2 regions of residence.

Results:

From the total of 407,792 hospital discharges in mainland Portugal (2011-2015) 11.9% comprised the selected PQIs, the majority related the acute composite PQI, followed by the chronic composite PQI. The hospitalization rate of the overall PQI increased from 999.5 hospitalizations (2011) to 1231,0 hospitalizations/100,000 inhabitants (2015), with an increase in all NUTS 2 regions. In 2015, while Algarve and North had the lowest PQI rates, Centro and Alentejo showed the highest ones.

Conclusions:

Between 2011 and 2015, there was an increasing trend of overall and composite PQI rates. Also, important differences between Portuguese regions were found that must be further studied.

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Key messages:

- Between 2011 and 2015, overall prevention quality indicator rate increased in Portugal.
- There are great differences between Portuguese NUTS 2 regions regarding prevention quality indicators.

DM Health systems and economics

Individual Versus Area Level Social Risk Measurement in the General French Population

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Background:

Ongoing health policy changes include a move towards alternative delivery and payment models. In addition, the emphasis is put on social determinants as part of performance measurement and payment calibration. Most payers and policy makers rely on area-level socio-economic data, which can lead to sub-optimal. However, little is known about the agreement between individual and area-level variables. The objective was to assess the agreement between individual and area-level social risk variables in the general French population.

Methods:

We used data from the CONSTANCES general-purpose cohort, a randomly selected representative sample of French adults aged 18-69 years. Data collected include socioeconomic and demographic characteristics, behaviors, and health data. We assessed the correlation or agreement between individual and area-level variables for 4 dimensions: household annual pretax income, secondary education completion, occupational group (workers), and unemployment.

Results:

115,263 individuals were included in the study, 53% female and aged 48 years on average. The median annual household income was 42,000 Euros (USD 50,400), 73% had completed secondary education, 7% were unemployed, and 9.3% were workers. The correlation between income measured at the individual and area level was positive but moderate ($Rho = 0.20$; $p < 0.01$). Individuals having completed secondary education had a higher area-level median completion rate compared to those having a lower education level (48% versus 41%; $p < 0.01$). Unemployed individuals had a slightly higher area-level median unemployment rate compared to employed ones (11% versus 10%; $p < 0.01$). Lastly, workers had a higher area-level median probability to be a worker rate compared to other individuals ones (25% versus 18%; $p < 0.01$).

Conclusions:

In the general French population, area-level socio-economic variables are poor proxies for individual-level social risk.

Key messages:

- Area-level socio-economic data is a poor proxy for individual data.
- Researchers and policy makers should move towards individual data.

The economic burden of NCDs due to low fruit and vegetables consumption in the Russia in 2016

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Introduction:

A significant risk factor for NCDs is low fruit and vegetables (F/V) consumption, which leads to economic and social costs in all countries, regardless of income level.

Aim:

To evaluate the economic burden of NCDs associated with low F/V consumption in the RF in 2016, including the direct costs and the economic losses caused by reduced productivity.

Materials and Methods:

An analytical review of the literature on the search for relative risks (RR) of morbidity and mortality from NCDs associated with low F/V consumption was carried out. Based on data on the prevalence of low F/V consumption in the RF (41.9%) and RR, the attributive risk for the population (PAR) was calculated for CVD, diabetes and several types of cancer. To assess the economic burden, the proportion of risk factor in morbidity and mortality from NCDs included in the analysis based on PAR was determined. Direct costs were calculated on the basis of tariffs for the provision of medical care in the RF in 2016 and the amount of disability benefits. Indirect costs included the loss of gross domestic product due to premature mortality and disability.

Results:

PAR of low F/V consumption in the RF in 2016 in mortality for all CVD was 5%, in morbility about 7%, in morbility of stroke - 10%. PAR of low F/V consumption in morbility of diabetes was 6%, COPD - about 5%. PAR of low F/V consumption in mortality for ovarian cancer was 27%, for kidney cancer - 20%, in morbility from 3% for stomach cancer to 40% for pancreatic cancer. The economic burden associated with low F/V consumption in the RF in 2016 amounted to about 162 billion rubles (0.19% of GDP). A significant contribution to the economic burden was made by cancer: pancreatic cancer (38.2%), colorectal cancer (21.3%), ovarian cancer (26.3%), kidney cancer (26.4%).

Conclusions:

An assessment of the economic burden will be an argument for justifying the feasibility of investing in the prevention of NCDs associated with low F/V consumption.

Key messages:

- To evaluate the economic burden of NCDs associated with low F/V consumption in the RF in 2016, including the direct costs and the economic losses caused by reduced productivity.
- The economic burden associated with low F/V consumption in the RF in 2016 amounted to about 162 billion rubles (0.19% of GDP).

Confraternal talks impact with general practitioners on the prescription for older adults

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Issue:

10% patients over 75 and patients aged from 66 to 75 years with a chronic disease take more than 10 concomitant drugs. Polypharmacy is a consistent risk factor of adverse drug events for elderly patients. Adverse drug reactions prevention is a national priority in view of quality of life and healthcare system costs increase.

Description:

In Normandy, since November 2015, various interventions such as confraternal talks or letters send to general practitioners (GPs) have been examined to optimize medication use in older adults. More than 16 drugs prescriptions were discussed with the family practitioner and a health insurance fund's physician-advisor. In addition, a prescription profile in elderly patients was given to this GP. Recommendations for good practices are also reminded.

Results:

10 weeks of physicians prescriptions were studied during one year (from september 2015 to september 2016). 686 general practitioners (GPs) had at least one prescription over 16 drugs and 265 GPs had at least two prescriptions over 16 drugs. 166 confraternal talks or phone calls between health insurance doctors and GPs have been leaded with a medication review. 233 letters have been sent to physicians to improve prescribing. 46% of GPs received a physician-advisor led intervention. After these interventions, prescriptions drugs number has decreased ($p < 0{,}001$) and the number of GPs having more than 16 prescriptions drugs has also decreased ($p = 0{,}27$). There is no significant difference between confraternal talks and letters. However, the physicians are more confortable with the confraternal talks to discuss their prescriptions.

Lessons:

Confraternal talks continued in 2017 with medication review and profile's delivery. A two years follow-up on these accompanying interventions will be made to optimize drugs prescriptions use for elderly patients.

Key messages:

- The physicians are more confortable with the confraternal talks to discuss their prescriptions.
- There is no significant difference between confraternal talks and letters.

Demographic forecasting of population projection in Greece: A Bayesian probabilistic study

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Background:

Demographic aging is an emerging issue in Greece, characterized by low fertility and increased life expectancy. Undoubtedly, demographic aging is a challenge for public health not only due to the financing of public pensions, but also for the increasing utilization of health care.

Methods:

The total fertility rate and life expectancy at birth are projected probabilistically using Bayesian hierarchical models and United Nations population data for Greece from the period of 1950 to 2015. These are then converted to age-specific mortality rates and combined with a cohort component projection model. This yields probabilistic projections of total population by sex and age groups, total fertility rate (TFR), female and male life expectancies at birth and potential support ratio PSR (persons aged 20-64 per person 65+) by the year 2100.

Results:

The total population in Greece in 1950 was around 7.5 million, increasing to 11 million based on the 2011 population census but is projected to decline to 7.5 million at 2100. TFR has followed a strong downward trend with 1.4 children per woman in 2005-2010 and is projected to have a slight increase to 1.6 and 1.8 children per woman for 2050 and 2100 with all values being below the replacement-level fertility. Life expectancy is expected to increase to 84 years for men and 88 years for women in 2050, and 90 years for men and 94 years for women in 2100. PSR is expected to decline dramatically from 3 in 2011 to approximately 1.5 in 2050 and 2100.

Conclusions:

Over the years, Greece has lost its youthful structure and has acquired the characteristics of an aging population, reflecting the population distribution of Western countries. Demographic aging is harmful for the economic growth, the social security system, the social assistance, and it is closely linked to national defense and public health. A long-term multidimensional program is recommended to confront the demographic issue based on the previous international experience.

Key messages:

- Total fertility rate will be below replacement level and potential support ratio will decline dramatically.
- A long-term multidimensional program needs to be developed to address the demographic aging.

Availability and drug lag of new medicines in South Korea

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Introduction:

This study aims to capture the availability of new medicines, to measure drug lags for new medicines, and to demonstrate various factors affecting timely availability of new medicines in Korean market.

Methods:

We construct two models for the analysis; logistic and Cox model. First, we provide the logistic regression to analyze the availability of new medicines in Korean market. Second, we are interested in the timely availability of new medicines in Korea. Therefore, we calculated the drug lag between the United States and South Korea, and applied an event history model for a statistical estimation.

Results:

There have been 160 NDAs approved by the FDA in the United States between 2007 and 2015. Among 160 new drugs approved in the United States during the study period, 112 NDAs (70%) were also approved by the MFDS in Korea, while 48 new drugs (30%) are not currently available in the Korean market. In addition, we are interested in the order of timing for market approval for 112 NDAs that approved in both countries. Not surprisingly, 95 NDAs (85%) were approved in the United States, and then approved in Korea, while 17 NDAs (15%) were approved in Korea, and then approved in the United States.

Conclusions:

Compared to the United States, a striking drug lag was observed in Korea. For the new drugs approved between 2007 and 2015, the median approval lag ranged from 1.72 years in 2013 to 5.84 years in 2007. Presence of the manufacturers in Korea and medicines belonging to the antineoplastic agents were not only positively associated with the availability in Korea, but also accelerated the time to approval in Korea compared to the reference.

Key messages:

- Compared to the United States, a striking drug lag was observed in Korea.
- Presence of the manufacturers in Korea were not only positively associated with the availability in Korea, but also accelerated the time to approval in Korea.

Assessment of State of Health and Healthcare Expenditure by Single-Person Households

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Background:

The latest statistics on household size in the EU show that in 2017 around one third of households in the EU comprised single adults without children. The study documents a direct relationship between individuals' health and patterns of healthcare expenditure by isolating single-person households and creating a new reference group in which household healthcare expenditure is based on one person's expenditure patterns in accordance with his or her own state of health.

Methods:

The study matched two surveys using Propensity Score Matching based on single-person household, age, and gender. Structural Equation Modeling (SEM) explores paths of relation between the population's income and socio-economic level and its health self-assessment and expenditure.

Results:

Single-person households' health expenditure increases with age and the differences in most expenditure categories are significant. The current study looks into the direct and indirect effects of income, gender, and SES on health insurance and other out-of-pocket health expenses among single-person households. A direct link exists between income, gender, and socioeconomic status (SES) and several aspects of health expenditure, depending on the specific age group. The indirect effects are attested via health status assessment, in which a negative correlation is found between self-assessed health status and various health-expenditure categories.

Conclusions:

The last-mentioned result may support the general perception that single-person households who feel that they are doing better than their near-equals enjoy better health. This line of inquiry yields a better examination of how a single-person household's state of health affects expenditure patterns without assuming ab initio that expenditure patterns attest to state of health.

Key messages:

- Healthcare system and policymakers have to be mindful of the profile of single-person households and should ensure to examine these households' patterns of healthcare expenditure as a function of age.
- Policymakers should seek alternative sources of funding for the single-person households' health-insurance outlays and should examine alternative ways of restraining their expenditure on dental care.

The social and economic benefit of health literacy interventions in the WHO EURO region

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Background:

Health literacy (HL) allows people to make informed decisions regarding their health, enabling them to understand health promotion activities and to self-manage their disease or complication without requiring support from healthcare services. HL has the potential to support sustainability in health systems by decreasing healthcare spendings stemming from lowered disease occurrence and progression, it can also impact on the rest of peoples' lives and their surroundings by allowing them to be more independent. This study researched the evidence for return on investment and the social return on investment for health literacy interventions within the WHO EURO region.

Methods:

A narrative literature review on published peer-reviewed reviews and grey literature was conducted by use of keywords and MeSH terms. Google, Google Scholar and PubMed were used find literature. The search on PubMed was restricted to reviews, published within the last 10 years (2009-2019), in English.

Results:

In total, 450 publications were screened 12 publications that analysed the economic or social aspect of HL interventions were identified. Five discussed the cost-effectiveness of health literacy, three the return on investment (ROI) and the remaining three the social return on investment (SROI) of HL. Types of HL interventions ranged from health promotion campaigns, web-based HL programs, prevention systems to education-based interventions. Cost-effectiveness differed between studies and fields. Evidence for ROI was found, the return ratios ranged from 0.62 to 27.4. Findings show SROI between 4.41 and 7.25, indicating additional value of social benefit next to improved health.

Conclusions:

A link between cost-effectiveness and HL interventions was established and ROI and SROI showed positive ratios. Further research is required in order to investigate whether HL interventions consistently achieve a positive returns.

Key messages:

- A link between health literacy interventions and positive investment returns has been established.
- Health literacy interventions show potential for sustainable development of health systems.

Capturing the social value and return on investment of public health services and interventions

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The need for investment in health and well-being to achieve sustainable development and inclusive economic growth is stronger than ever in the face of multiple adversities. Making the case for investing in public health is essential. The social, economic and environmental value of public health programmes has to be embedded in every organisational balance sheet in order to progress national and international commitments; and to enable sustainable policy and action for the benefit of people, communities and societies.

The WHO Collaborating Centre on Investment for Health and Well-being at Public Health Wales has developed a programme of work to assess the (social)return on investment of services and interventions. This involves looking at specific health and well-being outcomes, and estimating the wider social, economic and environmental value of the organisation and its various health protection and health improvement programmes. Specific health economics methods used will be Social/Return on Investment and Social/Cost-Benefit Analysis. The programme will generate an 'extended balance sheet', including estimates of health and well-being outcomes and monetarising the social and environmental value. This will result in establishing the holistic economic value of Public Health Wales. Specific outputs are: a comprehensive costing model to capture input; outcome and impact maps; capturing the value of public health programmes in terms of health and well-being, as well as social, economic and environmental outcomes. Finally, a generalised framework for other similar organisations will be developed.

This innovative programme aims to measure the social, economic and environmental value of Public Health Wales as a national public health institute. The developed framework can be used by other organisations across Europe to inform and guide their efforts to capture the wider social value, involve key stakeholders from the outset and achieve sustainable financing in the long run.

Key messages:

- Making the case for investing in public health by illustrating its social, economic and environmental value is vital.

- Social Return on Investment is an innovative and useful method to estimate the wider value of public health interventions.

Experience of clinical nursing guidelines development in Kazakhstan

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Issue/problem:

Since 2019, Kazakhstan has been implementing a project to develop standards for nursing services. The aim of project is support of practical nurses with the latest available evidence via development of clinical nursing guidelines (CPG) as well as standard operational procedures (SOP), sustainable development of this area.

Description of the problem:

As part of reforming the system of nursing education in Kazakhstan, applied baccalaureate for nurses was introduced. Shortcomings of current nursing education, the introduction of digitalization and e-health, poor quality of medical services, justified need of standardization. Within the framework of the project, development groups including nurses and medical specialists were organized. The following priority topics were selected: management of diabetes, asthma, CHF, prevention of CVD. Development group uses a guide for adaptation which was prepared by project international partners from Finland. Three trainings were conducted for nursing professionals. These trainings step by step provide comprehensive knowledge on adaptation process. recommendations to local conditions.

Results:

The main outcome of the joint work is the training of a nursing research committee, who will be responsible for sustainable development of this direction. The second result is guidelines for nurses, which are very demanded in the field. The third outcome is reflexing and gaining experience in overcoming barriers for further work.

Lessons:

Adaptation of CPG is preferred approach for countries with a low level of socio-economic development because of less resource, time consuming. The adaptation process requires work commitment, a sufficient level of English proficiency, respect of authorship, but taking into account local conditions.

Key messages:

- Adaptation of nursing CPGs is an important part of standardization of medical services in order to improve the quality of medical care.
- Thorough planning of the process, training of development group will allow overcome barriers to implementation.

Economic burden of main Noncommunicable diseases in the Russian Federation in 2016

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Aim:

To estimate the economic burden of noncommunicable diseases (NCDs) in the Russian Federation (RF) in 2016, including the direct costs and the economic losses caused by reduced productivity.

Material and **Methods:**

We included 4 diseases: cardiovascular, type 2 diabetes, cancer and chronic pulmonary disease (COPD). We used the official statistics data collected by Ministry of health on the number of patients, health care resources utilization (hospitalizations, emergency visits, outpatients' visits). The costs of health care were obtained from health insurance fund. Directs nonmedical costs included disabilitypayments, calculated based on the number of disabled persons from each group and by the amount of the disability allowance. Indirect costs (economic losses) included decreased productivity due to premature mortality and disability. The potential years of life lost (PYLL) were calculated using the number of life years lost due todeath and disability due to NCDs before 70 years. Human capital approach was used, and calculation were based on the GDP per person.

Results:

Number of PYLL due to premature death from NCDs was estimated to be 8,0 million years. Economic burden because of NCDs in 2016 in the RF reached 3,3 trillion (45.9 billion €), which is equivalent of 3.9% of GDP for this year. Direct costs were responsible only for 13% of losses, indirect costs for 87% of the total burden. CVD were responsible for 81,4% of burden, cancer – for 7,1%, diabetes - 6,5% and COPD for 5,0%.

Conclusions:

The economic burden because of NCDs in the RF in 2016 was 3.3 trillion (3.9% of GDP). Such the significant economic burden and absence of positive dynamics is a strong argument for increasing investments in the prevention and treatment of NCDs.

Key messages:

- Number of PYLL due to premature death from NCDs was estimated to be 8,0 million years.
- Economic burden because of NCDs in 2016 in the RF reached 3,3 trillion (45.9 billion €), which is equivalent of 3.9% of GDP for this year.

Development of health management system with recording daily living habits and body compositions

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It is difficult for university students to maintain their health. Department of health management was opened at April 2018 in Tokai university, Japan. About two hundred students entered it last year. Health management system was developed to maintain their health through the college life. The system is named THINKss (Tokai Health INtelligence Knowledge Support System). The number of registered students increased about four hundred this year. Every student can record their daily physical and mental conditions, meal photos with the time, body temperature, blood pressure, bone density, body compositions on their smartphone. If they use activity trackers with a wrist-based heart rate sensor (Garmin co. ltd.), their daily activities and sleeping status are corrected through API automatically. The weather information around university is also recorded everyday. Every student can browse own measurements on their smartphones. Because physical status includes cold symptoms (sneeze, throat pain, cough, fatigue, articular pain, muscle pain, chill, and body temperature), the system can recommend visiting a clinic. Because three meal photos are shown alongside, the balance of the meals is known. It may improve their meals. Because the activity tracker records advanced sleeping status (rem, light, deep, and moving), the relationships between mental conditions and sleeping status should be analyzed. Our previous study for common workers showed that mental status related with sleeping status, taking lunch of convenience-store, standard deviation of time of taking lunch, and oversensitivity to noise. Relationships between body composition changes and the lifestyles should be analyzed for university students. Some alert logics for body composition changes and exacerbating mental conditions may be provided based on the evidences from cumulative data of the health management system. These evidence-based alerts will contribute to maintain student's health through a college life.

Key messages:

- Health management system was developed to maintain student's health through the college life.
- Evidence-based alerts will contribute to maintain student's health through a college life.

Public expenditure on health promotion and prevention interventions in Austria in 2016

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Issue/problem:

Government and social insurance-funded health promotion and prevention interventions in Austria are surveyed on an irregular basis. Comprehensive data on government expenditures, categorized according to financial providers and/or intervention types had not been published since 2012.

Description of the problem:

In accordance with Austrias current federal target contract, the survey is intended to support the targeted use of funds in the fields of health promotion and prevention by providing timely and detailed information on public spending in these areas.

Results:

In 2016, the public sector spent 2,441.3 million euros on health promotion and prevention, which corresponds to 280.6 euros per capita (of the Austrian population). Additionally, administrative bodies reported staff-related costs, which could not be monetarily assessed for all administrative levels.

70 per cent of the expenditure on health promotion and prevention incurred by public institutions in Austria went towards tertiary prevention. The shares for primary and secondary prevention are 13.5 and 13.2 per cent respectively, the remaining funds were spent on health promotion and capacity building (3.4 per cent).

Lessons:

The collection and coordination effort is considerable for data reporters and study authors, still more frequent collection facilitates data reporting and quality.

An overview of the data is still not available at the administrative level of the countries (Länder), this could contribute to informed decisions.

Key messages:

- Expenditures on health promotion and primary prevention show high growth rates for the period 2012-2016 (+21.3%) reflecting the continuing social importance that this topic has gained in recent years.
- An allocation of funds to the areas prioritized in the Austrian health promotion strategy 2013-2016 is evident for at least three topic areas.

Balanced Scorecard for performance assessment in healthcare settings: a review of literature

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Background:

The Balanced-Scorecard (BSC) is a management tool developed in the early 1990s to balance the impact of financial and non-financial parameters and analyse the organisational performance in private companies according to four determinants. The original BSC has spread to different sectors in the last decades, including healthcare services, in numerous amended versions. The aim of our project was to identify potential indicators of BSC for performance evaluation in general hospitals.

Methods:

We performed a systematic review of literature on Pubmed and Web of Science using the search string ''balanced scorecard AND healthcare AND indicators''. We found 102 papers; 80 papers were removed for irrelevance, absence of full text or performance indicators. We only considered articles that followed the classic structure of BSC (Customer, Internal Processes, Financial, and Learning and Growth). The indicators listed in them were classified according to the four determinants of organisational performance.

Results:

Eight articles out of 22 followed the classic structure of the BSC. The most represented category was Internal Processes (59 indicators), followed by Learning and Growth (52), Customer (40) and Financial (33). The number of common/overlapping indicators was low (5 for Internal Processes and 4 for the three other categories).

Conclusions:

While BSC has spread to different settings, the list of indicators used in the classic four determinants for performance evaluation is heterogeneous. While common points can be identified between indicators, our review highlighted that every BSC is developed in a unique way which makes it difficult to identify a general framework adaptable to different hospital settings.

Key messages:

- The use of the Balanced Scorecard as management tool has spread to healthcare settings in the last decade.
- Indicators in BSC for healthcare settings are heterogeneous and only a limited number follow the standard structure of BSC.

Health insurance literacy assessment tools: A systematic review

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Background:

Health insurance literacy (HIL), defined as the ability to seek, obtain, understand health insurance, and use it once enrolled, is a concept that has only recently started to gain increasing attention. HIL is likely to influence individual's usage of health care services and subsequent outcomes. Yet, little is known about its distribution and its associations with health(-related) outcomes, due to the fragmented nature of the field and assessment tools. The objectives of this study are to (1) summarize information on current assessment tools for HIL and related constructs, (2) describe conceptual dimensions assessed, and (3) describe psychometric properties of found tools.

Methods:

A systematic literature review was performed using various databases (e.g. PubMed, CINAHL, Econlit), identifying literature that provided a description of tools assessing HIL and related constructs (e.g. health insurance knowledge). In the following, two independent reviewers will screen abstracts and studies included for full-evaluation. The COnsensus-based Standards for the selection of health Measurement Instruments (COSMIN) will be used to assess quality of included studies and measures.

Results:

Information on found tools will be summarized, including information on type of measure (e.g. objective or self-reported assessment), items and scales, scoring, target population, assessed domains, correlation with other measures. Preliminary results show large variations across tools that have been used to assess HIL and related constructs, with the majority not being rigorously validated.

Conclusions:

The resulting summary of this study is intended to work as a basis for the conceptualization of HIL and development and validation of assessment tools, with the aim to homogenize and improve research in the field of HIL.

Key messages:

- Current knowledge on HIL distribution and its association with health(-related) outcomes is fragmented due to lack of consistency on HIL conceptualization and assessment.
- This systematic literature review aims to summarize information on current HIL assessment tools to inform the development and validation of HIL assessment tools.

Measuring inequity in using routinely collected data in an emergency setting: a systematic review

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Background:

The international literature has highlighted many potential challenges in terms of inequitable access to care. In the last few years, health equity is becoming an increasingly important issue for policymakers, particularly in developed countries. The aim of this systematic review was to find how equity is measured and to identify some of its determinants.

Methods:

We conducted a systematic review on all major databases (Medline Ovid SP, PubMed, Embase and Web of Science), following the PRISMA guidelines. We included published observational studies that reported on health equity and using administrative data, with a focus on emergency and unplanned hospital care. Study selection and data extraction were conducted independently and compared by two reviewers.

Results:

In total, 223 records were screened and 39 articles met the inclusion criteria. Studies come from the United States (US) (23), United Kingdom (6), Canada (4), Australia (2) and some European countries (4). To measure health inequity, most of the studies used at least one of these 4 indicators: hospitalisations for chronic ambulatory care sensitive conditions (or preventable hospitalisations), emergency hospitalisation rate, readmissions or mortality. The most relevant health equity determinants concerned race/ethnicity (19), poverty (17), health insurance coverage (17) and gender (16). Race/ethnicity and gender are important determinants of inequities. Concerning poverty, despite the use of heterogeneous indicators, most of studies showed a socio-economic gradient of access to care. Health insurance coverage was often used but with conflicting results.

Conclusions:

The use of indicators linking primary, emergency and hospital care seems to be particularly relevant to measure health inequity. Race/ethinicity, gender and socio-economic status are clear determinants of inequitable access to care. More studies are needed to explain and analyse the determinants of health equity.

Key messages:

- Health equity remains a major issue even for high-income countries health care system.
- Quantitative data about health equity still are needed to support policymaker's recommendation.

The endless story of copayment insurance in Slovenia - is it necessary?

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Issue/problem:

Slovenia maintains its specific type of voluntary health insurance, which is actually a complementary health insurance (CHI). The main criticism against it was in its regressivity as the premium is flat-rate, equal for all insured.

Description of the problem:

The share of CHE in total health expenditure (THE) has been growing until recently and now represents roughly 15% of THE. Even if remains an important source of financing, there are still pressures to abolish it. The present government again set its abolishment as one of the priorities. As much as it is regressive in essence, some of the negative effects of regresivity were offset by the State stepping in by paying the copayments for those citizens who are in need of social cash benefits.

Results:

CHI contributed to the stability of the funding of Slovenia's health care system. The space for the increases has become very limited as it covers up to 90% of the price in the case of many medicines, several dental procedures, rehabilitation and similar services. That means that additional increases with offsets to CHI from the compulsory health insurance are not possible. When the need for these emerges, CHI will not be a solution anymore, which means that an alternative needs to be found. From the several options we explored, the most probable is a gradual increase in the compulsory health insurance contributions.

Conclusions:

CHI in Slovenia remains a controversial topic although its criticism has lost edge recently. Partly, this was due to the clear demonstration of its contribution to the stabilisation of the THE in the times of austerity. On the other hand, the mass of money in the compulsory health insurance has increased due to the economic growth and the need to offset costs to CHI was reduced. But, as there is little space left for such actions with the new crisis, a clear scenario on how to address the need for additional funds in the health care system is needed.

Key messages:

- Complementary health insurance contributed to the stability of health expenditure during crisis.
- The main alternative to CHI is its full inclusion into the compulsory health insurance.

The satisfaction of the new competencies and roles of nurses in Kazakhstan

Vitaliy Koikov

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Background:

When interviewing nursing specialists of the Republic of Kazakhstan (RK) about the level of satisfaction with the prospects of the profession with the participation of 9039 nurses, 71% of whom believe that nurses should be given special status. To study the satisfaction of the new competencies and roles of nurses in the framework of the reform of the nursing service conducted a survey of employers

Methods:

The cross-sectional study in 1417 of employers participated, of which 11% were senior doctors, 26% deputy chief physicians, 50% of heads of departments, 13% others.

Results:

Analysis of the survey results showed the following:

- more than 70% of employers have a positive attitude towards nursing service reforms. According to 48% of employers, the functionality of nurses is expanded. 54% of nurses fully cope with new functional responsibilities. 44% of respondents say that with the expansion of the functionality of nurses, doctors have more time to perform more complex skilled work. According to 44% of employers, nurses should delegate the primary reception and examination of the patient, 42% setting the primary diagnosis, 33% deciphering the results of laboratory and instrumental studies, 21% independent visiting the patient at home, 8% active prenatal and postnatal patronage, 17% rendering premedical and emergency medical care. 62% of employers consider it appropriate to introduce the practice of joint training of doctors and nurses and fully support the increase in the independence of the nursing service.

Conclusions:

In general, employers support the reform of nursing, are satisfied with the new competencies of nurses and have a positive attitude towards increasing their independence.

Key messages:

- It is necessary to improve basic training programs in medical colleges and to implement effective advanced training programs for working nurses.
- It is advisable to practice the introduction of co-education for doctors and nurses - the practice of inter-professional teams specialists.

Calculation of road accessibility for the rural population in the Shikoku Island of Japan using GIS

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Background:

The United Nations has defined 17 Sustainable Development Goals as a blueprint for helping ensure the health and well-being of our world by 2030. The global goals address challenges we face including poverty, inequality, climate, environmental, peace and prosperity. The goals each have targets and indicators to help measure success. Indicator #9.1.1 is defined as "Proportion of the rural population who live within 2 km of an all-season road", which can aid in understanding multiple areas of human well-being including access to food, health care, education and in support of economic development. By understanding access to infrastructure, we can focus on affordable and equitable access for all. We focused on the Shikoku Island of Japan and calculated indicator #9.1.1 using spatial analysis.

Methods:

We utilized data from three sources listed below. Cho-cho-moku boundaries population data from the Esri Japan corporation. Metropolitan Employment Area data from the Center for Spatial Information Science at the University of Tokyo. Emergency transport road data from the MLIT of Japan. We conducted proximity analysis with Geographic Information System (GIS) and estimated population of the target area using the area ratio of the target area to the original Cho-cho-moku area.

Results:

The percentage of the rural population who live within 2 km of an all-season road is 79.5% and those who have no access to an all-season road in the Shikoku Island is 20.5%.

Conclusions:

We found the proportion of the rural population that cannot reach an all-season road by calculating indicator #9.1.1. 20.5% of the rural population in the Shikoku Island of Japan may have difficulties accessing essential services such as health care, education, food, and may have difficulties with economic development. By understanding accessibility to road infrastructure, we were able to identify areas at risk for access. We can work towards creating more equitable access in a next step.

Key messages:

- By conducting spatial analysis with GIS, we can identify areas at risk for access to infrastructure.
- we can focus on creating more affordable and equitable access for all by understanding access to infrastructure such as health care, education and food.

How the Euripid collaboration contributes to affordability of medicinal products

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Issue:

National authorities for pricing and reimbursement of medicinal products need up-to-date, easy accessible and unbiased information on the availability and prices of medicinal products in their fellow countries. Such information is needed for informed decision making, very often by countries who have an element of external price referencing (EPR) integrated into their national drug policy. EURIPID (www.euripid.eu) is a voluntary, non-profit collaboration between mainly European countries on building up and maintaining a database with information on national prices of medicinal products. It makes prices of price regulated medicinal products more transparent via an on-line accessible, comprehensive, reliable, and easy-to-use database.

Challenges of the database are

- to bring the numerous products of the currently 28 countries to a common platform in a standardised format and to translate the products and their presentation into English language (especially those who have no centralised EMA marketing authorisation),
- to present four comparable price types (e.g., to which Danish price type does the British NHS price compare),
- to calculate or approximate missing price types,
- to provide additional information allowing to indicate the real price of the product rather than its list price.

Results and lessons learned:

The participating countries agreed by online voting to share information on Managed Entry Agreements (or related arrangements) and provide volume information for the reimbursed products in the database. The countries also agreed to provide background information on the national pricing system. In the last EU period the Collaboration developed a Technical Guidance Document on External Price Referencing that regulates in 12 principles the "Do's and Don'ts of ERP".

In the new grant period a stakeholder dialogue platform will be established to strengthening the cooperation within the EU in the field of pricing of medicinal products.

Key messages:

- The Euripid database is a valuable tool that is aiding countries to perform price comparisons for ERP or price monitoring for medicinal products in a standardised format.
- ERP is still widely used in Europe. The new activities of Euripid (e.g., a website offering information to the public), will contribute to a fair use of ERP and thus improve national decision making.

DN Health workforce development and research

A new health professional profile in Switzerland: the county practitioner?

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In the vogue to provide Geneva with a health and social system with intermediate structures between practitioners and hospitals, many proposals have been made. All have the characteristic of omitting the fact that the general physician, central element of the system, could be set to one side. A family doctor remains a clinician, and is manager of the disease. The proposals lack what we call the community dimension and do not approach citizens from the point of view of their health.

Some components of this new professional profile are at the individual level and already form part of the primary care physician's activity. Others, on the other hand, are akin to collective or community-based interventions, so are not generally included in the primary care practice. Thus, in collaboration with the central structures of the canton and the authorities, activities such as medicine at school or nursing home, epidemiological surveillance, participation in development projects and actions dealing with the environment, etc., could represent the community part of this new practice.

In view of this, the concept of 'county practitioner' was implemented in the framework of a global project emanating from the authorities of a county of the state of Geneva in Switzerland, which aimed to develop social links, well-being and health through the complete restructuring of the village center. Other projects, in other municipalities, were inspired by this first experience, although the 'country practitioner' is currently limited to a role of "health adviser". Several examples could be presented. The conditions for bringing into being such a profile are numerous: the drafting of specifications, the political will and the benevolence of fellow practitioners fearing a loss of power. Once again, the community doctor does not replace the attending physician, he completes his action mainly in the field of community health.

Key messages:

- The concept of 'county practitioner' was implemented in the framework of a global project emanating from the authorities of a county of the state of Geneva.
- The conditions for implementing such a profile are numerous.

Social aspects of occupational diseases in clothing industry in Bulgaria

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Background:

The clothing industry is traditionally well developed branch of industry in Bulgaria Harmful factors of manufacture are forced posture, monotonous work, noise, vibration, poisons etc. At the beginning of 2016, the persons directly employed in the sector add up to 92 000, representing 6% of the employees in Bulgaria. An impairment of musculoskeletal and peripheral nervous system is frequent among these people in relation with the exposure of their professional experience. The aim of the study is to observe the influence of occupational diseases in clothing industry on social and emotional wellbeing of the employees.

Methods:

For the purposes of the study, 103 persons employed in clothing industry, with impairments of the musculoskeletal system and the peripheral nervous system, were investigated. They were admitted to the Department of Occupational Diseases, of the University Hospital in Pleven during the period 2014-2017. Data were collected by interview, documents review and clinical examination.

Results:

Analysis of the results revealed a statistically significant inverse association between performance of daily life activities and length of exposure of patients ($p < 0.05$). This means that increasing length of exposure restrict the abilities of the investigated persons to perform daily life activities. About 62% of the respondents are often and long standing patients, with more than 4 cases of hospitalization and over 30 days of disability per year. In 68% of the subjects the average duration of one illness exceeds 10 days. Long period of disability affect their income, working position and family relationships. More than a half of people surveyed (56%) cannot afford the recommended rehabilitation which retards the process of recovering. All these facts affect their mood and health self-esteem.

Concussion:

Occupational diseases in clothing industry affect quality of life, social and professional performance of the employees.

Key messages:

- In clothing industry many risk factors affect workers' health. There is a significant association between length of occupational experience in this branch and social aspects of occupational diseases.
- Occupational diseases in clothing industry affect capability of work and daily routines of employees. They have been associated with long and expensive period treatment and rehabilitation.

From pillars of postgraduate education towards motivated and competent public health workforce

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Background:

Motivation and effective supervision are key factors in postgraduate Public Health Education. On the one hand motivation represents a power that derives and then steers students' activities in order to achieve their objectives; on the other hand, supervision practices can significantly influence the behavior of students, from encouraging students to endeavor future goals to letting them lose the motivation to continue the study. The aim of this research is to study motivation of PhD students and to explore the supervision practices at the Department of Public Health.

Methods:

A Special questionnaire has been developed and quantitative method has been used for this study. The questionnaires were distributed to all PhD students at TSU Faculty of Medicine.

Results:

A total of 79 completed questionnaires have been used for analyses (response rate 52,6%). The study found that around 90% of the PhD students are generally satisfied with existing supervisory experiences. 87% of respondents mentioned that they have regular meetings with their supervisors and the importance of these meetings are evaluated as important or very important. The study also found that PhD students are more influenced by intrinsic motives and students place priority emphasis on the interest in scientific research and continuing learning experience. At the same time the greatest incentive for deciding to become a PhD student is the possibility of acquiring experience within international partnerships, among them short- or long-term mobility in the

Framework of DIKU funded project „Georgian-Norwegian Collaborative in Public Health'' and NIH funded project, ICREATE - Increasing Capacity in Research in Eastern Europe''.

Conclusions:

The study has provided the insights into supervision practices and PhD students' motivation. Survey has raised some emerging issues, which are inclined to be improved in order to strengthen the postgraduate Public Health Education.

Key messages:

- The research emphasizes the importance of evaluating the motivation and supervision practices in postgraduate public health education for strengthen the public health graduates and workforce.
- The research highlights the impacts of international collaborative partnerships in transitional countries.

Evaluation of chronic disease follow-up training of family physicians in primary care units

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Background:

Chronic diseases are a major cause of morbidity and mortality due to late diagnosis and insufficient treatment. This study deals with the training on chronic diseases organized by the Ministry of Health in the provinces. The aim of this study was to measure the effectiveness of training programs for family physicians in a province.

Methods:

This semi experimental study was carried out during the training held in Bingöl that is eastern city of Turkey, on 22-26 October 2018 and 19-20 December 2018. The universe of the study consisted of family physicians working in the province. Of the 90 family physicians working in the province, 75 participated in the study. The training was conducted by the researchers and (before-after) 16-question test to the participants were used. The trainings cover the sub-heading Cardiovascular Risk Assessment and Diagnosis and Treatment of Hypertension. The family physicians were divided into 7 groups and were given 7-hour training. SPSS 25 program was used to analyze the data. In the analysis of data, Wilcoxon test, Cochran's Q test and Bayesian approach samples t test were used.

Results:

The average number of correct before training was 7.33 (min: 2 - max: 13), after training 12.64 (min: 7- max: 16; $p < 0.001$). After the training, participants' correct answers to 15 questions increased ($p < 0.001$). Increase rate is 71%. Bayesian factor was found to be < 0.001 according to the results of Bayesian approach t test. There is definite evidence against the H0 hypothesis. According to the results of this quasi-experimental study, training is very effective.

Conclusions:

In this study, it was shown that the education of the family physicians about the chronic diseases of the Ministry of Health is effective in increasing the knowledge level of family physicians.

Key messages:

- The training of the family physicians in charge of the primary health care is important.
- This study showed that education is very effective accorging to the pre-training.

Looking for bridge engineering: the role of an information officer in 'sanitary service'

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Background:

Launched in 2018, 'sanitary service' aims at training all future health professionals in prevention issues, through elaborating concrete projects designed for population identified as priority. It responds to the first axe of the National Health Strategy, which is to develop a prevention and health promotion policy. In our region, about 430 actions have been implemented by 2200 students, in interdisciplinary teams.

Objectives:

From this context occurred a reflection on how a documentary product can be used as a bridge between various health disciplines and a path to health promotion. A triple goal is pursued: provide pedagogic support, share a common view and langage, help with taking action.

Results:

6 theme-based document files were created. They were conceived as a collection, with a running gag in titles, colourful covers and numerous illustrations.

As for promotion and dissemination, they appeared on our website, on social networks, but also (Back to the Future?) printed as proper books and sent to our partners. Our team also got involved in methodological assistance, at university and in our resource centre.

Thanks to its formal innovation and its multidisciplinary audience, this production built a collective culture of health promotion. Overpassing sanitary service, it is now used by other professionals for different purposes, including project managers during training sessions.

Conclusions:

This action faced the recurring challenge of assessing a support function such as ours, but performed in becoming a showcase to promote our structure.

Information accessibility could be improved by better internet referencing, its attraction by infographics, its efficiency by evaluation. But above all, live interaction appears to be the key in a knowledge transfer strategy.

Key messages:

- Sanitary service is an opportunity to picture a common view on health promotion.
- As documentalists, let's build bridges to knowledge by turning into super mediators.

Physician-patient communication: A qualitative study of perceptions, barriers, and needs in 4 EU MS

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Background:

Good physician-patient communication is an important aspect of patient-centered care and contributes to positive health outcomes. However there is a lack of standard EU communication training policies for physicians. This study explores the barriers to good communication for both physicians and patients across four EU countries as part of the EU-funded Project ''H-COM'', Health Communication Training for Health Professionals.

Methods:

Eight focus groups were conducted with a total of 31 patients and 38 physicians from Germany, Greece, Spain, and Cyprus. Three themes were covered; perceptions, barriers and needs for health communication.

Results:

Commonalities and differences between countries and target groups were identified, with participants discussing attitudinal, emotional, educational, and systemic barriers to good communication. Identified barriers among patients include a deeply embedded hierarchical notion and arrogance among physicians, inadequate or difficult to understand language, busy schedules. Among doctors barriers identified were mostly systemic having to do with busy schedules, large number of patients, and lack of time. Participants especially patients indicated a significant gap in health communication knowledge, skills, and training for physicians, with several regional differences being present especially between Mediterranean and central European countries.

Conclusions:

The results imply a strong need for communication training, tailored accordingly in specific countries. Further development of policies related to the inclusion of such training in medical studies across EU would be of great importance.

Key messages:

- There are differences concerning health communication needs and barriers between EU regions and the development of tailored training.
- Although identified as important there is a lack of health communication training in certain EU MS and an urgent need to incorporate training in basic medical and nursing education.

Predictors of job satisfaction in public hospitals in Belgrade, Serbia: a cross-sectional study

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Background:

Growing evidence has suggested that job satisfaction in the health-care system can affect productivity, the quality of service, and patient safety. Knowledge regarding job satisfaction of health workers and its determinants is valuable to health-care managers for decision making in the field of personnel policy. This study was aimed to assess job satisfaction among health workers in public hospitals in Belgrade, Serbia and identify its associated factors.

Methods:

This was a cross-sectional study, carried out within 24 hours, in December 2018, as a part of a national survey, which is conducted annually in all health care institutions in Serbia. Data were collected by self-administered structured questionnaire, which was distributed to all health workers who were at work at the time of the survey (11,588 health workers in 26 public hospitals in Belgrade). The completed questionnaires were returned by 9,203 health workers, which constituted the response rate of 79.4%. Multivariable logistic regression was applied to identify factors significantly and independently associated with a higher level of job satisfaction.

Results:

Overall, 31.4% of the respondents were satisfied with their job. Age less than 35 years [AOR = 1.40; 95% CI (1.18-1.67)], no work stress [AOR = 2.66; 95% CI (1.94-3.65)], satisfaction with time for accomplishment of tasks [AOR = 1.92; 95% CI (1.64-2.26)], satisfaction with recognition and value of health workers' engagement [AOR = 1.79; 95% CI (1.51-2.13)], and satisfaction with leadership style and work organization [AOR = 1.90; 95% CI (1.60-2.26)] were identified as determinants with highest influence at job satisfaction.

Conclusions:

Less than third of health workers in Belgrade's hospitals were satisfied with their job, while satisfaction with various aspects of the job, age, and work stress, were identified as predictors. The results of this study could be useful in proposing strategies to improve job satisfaction of health workers.

Key messages:

- The job satisfaction of health workers in Belgrade's hospitals is low.
- Health-care managers should pay attention to create an environment that promotes job satisfaction and reduces work stress.

Implementation and development of guidelines in the emergency services in Kosovo – PARIHS framework

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Background:

The aim of this project is to create understanding on the determinant factors enhancing adherence to treatment guidelines for the emergency medical services in Kosovo (EMSK). Focus is on barriers, and enablers while introducing the guidelines. It is aiming to create clearance and understanding of how and why the implementation outcomes are achieved. The factors influencing implementation will be mapped in three main domains. The domains are part of the determinant framework Promoting Action on Research Implementation in Health Services (PARIHS). Each of the domains is further divided into sub-constructs.

Methods:

The process of implementing treatment guidelines into the emergency medical services in Kosovo was observed and documented by 4 researchers, using a participatory research design. The PARIHS framework that consists of three core components: evidence, context, and facilitation was applied to make clarity on what works better and why, in order to achieve the outcomes of the implemented guidelines.

Results:

The preliminary results have shown that the three constructs have an important role in the process of implementation. The domain evidence determined the way the evidence based practice is conceived in this particular setting. The domain context concerns the organization and teamwork shaped challenges and possibilities for adherence to the guidelines. The role of an external facilitator was of specific importance.

Conclusions:

The PARIHS framework serves in both practical and theoretical planning of an intervention. In the present project it provides clarity on planning of the process, while also offer understanding of the elements that contribute to the sustainability of the intervention. Finally the lessons from the approach can be replicated in similar context.

Key messages:

- Implementation projects can be more successful suing a framework to direct the effort.
- Such interventions should be premised with clarity on the evidence, the local context, and facilitation factors.

Preferences and expectations of graduates in nursing towards lifelong learning (Bulgaria, 2016-2019)

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Background:

Nurses have a vital role to play in provision of high quality and safety health care in a global perspective. This is extremely valid for Bulgaria with the lowest nurses to doctors' ratio 1.1. The future nursing generations should be motivated for lifelong learning (LLL), irrespectively of scarce human and financial resources in health care. The aim of the study was to explore preferences, expectations and motivation of graduates in nursing towards LLL.

Methods:

A cross-sectional descriptive study was conducted among 174 bachelors in nursing (152 women and 22 men) before their graduation in 2016-2019 at the Faculty of Health Care in MU-Pleven. Anonymous self-administered questionnaire was used to collect information about graduates' work preferences, expectations and motivation for LLL (response rate 95%). Data processing was performed by SPSS v.24 using descriptive statistics and correlations. The accepted level of significance was $p < 0.05$.

Results:

Most of the graduates prefer high-technology clinics with only 13.2% for outpatient care and community centres; 50% plan to get higher educational degree; 81.5% will need a clinical mentor to start practicing. LLL is appraised by 82% as ultimate for nursing. It should be directed to developing skills and knowledge for effective team work (29.9%), capacity for self-directed practice and adaption to innovations (24.1%), skills to cope with critical situations (14.1%). The first motivating factors for LLL are professional development (44.3%) and better payment (37.4%). The most common demotivating factors: financial reasons (37.9), health problems (21.3), absence from home (13.8%), employer permission (13.8%). All the results have $p = .000$ for one sample x2 test.

Conclusions:

The graduates understand the crucial role and have realistic expectations of LLL for their professional development. Prevailing motives and demotivating factors correlate to the whole Bulgarian health system problems.

Key messages:

- The graduates in nursing at the Faculty of Health care in Pleven Medical University highly appreciate the role of LLL for their professional development and prestige.
- The schools in nursing should continue working to further motivation for LLL as indispensable requirements for contemporary effective and efficient nursing care delivery.

Clinical psychologists in primary mental health care in Norway - what to do?

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Background:

The past 20 years Norwegian health authorities have put significant effort into increasing the number of clinical psychologists in primary health care. By 2020, all Norwegian municipalities are required by law to have clinical psychologists available. In 2018, only about half of the 422 municipalities had fulfilled this requirement, and the number of vacant positions is growing. The purpose of this study was to investigate the usefulness of clinical psychologists in a primary care setting as perceived from primary mental health care leaders/employees and those who educate clinical psychologists at the universities.

Methods:

We combined the use of open-ended questions in a survey (N = 456) among leaders and employees of primary mental health services in Norway, with data from semi-structured focus group and individual interviews (N = 15) with academic staff at the four universities in Norway that provides education for clinical psychologists.

Results:

The discussion on utilisation and usefulness of clinical psychologists in Norwegian primary care often condensates into weighing time spent on a never-ending demand for individual therapy against time spent on health promotion, prevention and system level work. Traditionally, Norwegian psychologists have received education mostly focusing on treatment methodology and individual therapy most suitable for the specialist services. The curricula are now changing towards more health promotion/prevention in primary care, but still lacks focus on system level approaches like collaboration with and guidance of other professions - which are the qualities asked for from those who hire clinical psychologists in primary mental health care.

Conclusions:

Interdisciplinary collaboration with a wide spectre of professionals and thereby 'working with and through others' in the health and welfare services, was suggested to be the most efficient way of utilising psychological clinical competence.

Key messages:

- The Norwegian clinical psychologists' education is becoming more primary care friendly.
- Psychologists in primary care must be part of interdisciplinary teams where they can work with and trough others.

FINDRISK and occupation: need of prevention of diabetes type 2 at the workplace

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Background:

Diabetes mellitus is a risk factor for atherosclerosis, cardiovascular morbidity and increased mortality. Identifying people at a high risk of developing diabetes determine the prognosis and quality of life of the patients and prevent the development of macrovascular complications of diabetes. Within the framework of an international project, the ten-year risk of developing type 2 diabetes mellitus in two age groups workers (up to 25 and over 55) of four economic sectors (construction, clothing, hairdressing and cosmetics, and healthcare) has been estimated.

Methods:

The survey included 150 workers from four economic activities. The FINDRISK questionnaire was distributed among them. Plasma glucose and serum lipids (HDL, LDL, triglycerides) were analyzed. The statistical analysis of the results was done using SPSS 16.

Results:

The mean FINDRISK score for the age group up to 25 years is 3.6 ± 3.8, and for respondents above 55 years - 10.1 ± 5.0. The analysis highlights the higher risk of developing diabetes among healthcare workers, where the score of older workers is 11.63 ± 6.61, as well as in the textile and clothing industry (11.17 ± 4.3). These results call attention to a potential link between the occupation and the risk of developing type 2 diabetes in these sectors of the economy and the need for additional measures to search for causes and prevention.

Conclusions:

A significant proportion of the participants over 55 years old in the healthcare and textile and clothing sectors are at an increased risk of developing type 2 diabetes, which requires a change in lifestyle, as well as the identification of workplace hazards that lead to these results. The FINDRISK questionnaire can serve as an indirect assessment of the cardiovascular risk of older workers. Additional preventive measures are needed to limit the risk of developing type 2 diabetes mellitus as well as cardiovascular risk in the identified risky occupations.

Key messages:

- Occupation could contribute to the life style risk factors for developing diabetes type 2.
- Occupational risk reduction measures and health promotion are needed to protects workers.

A methodological support to set up multidisciplinary group practices in Southeastern France

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Issue/Problem:

Despite high medical densities in Southeastern France, access to prevention and care is difficult in some territories due to a lack of health professionals. The Regional Council supports multidisciplinary group practices (MGP) to improve primary care access and quality. When developing them, health professionals have to propose a health project addressing population health needs in the area.

Description of the problem:

Two complementary resource centres -the Southeastern Regional Health Observatory and the Regional Committee for Health Education- collaborate to provide support to health professionals in the creation of MGP. The process includes a territorial assessment based on quantitative indicators about various environmental and socio-economic determinants, morbidity, mortality, and health-seeking behaviours. Stakeholders then discuss the results of this assessment in order to confront it to their experiences, identify priorities and design the health project: it defines the forms according to which professionals will work together and set specific objectives and activities to cover main public health needs in the corresponding territory.

Results:

Since 2011, our methodological support has benefited 45 MGP projects: 19 were successful, 13 are still in progress and 13 projects were not completed. It helped decision-makers in the identification of priority territories in terms of prevention and care; it also presented outlooks of the current and coming health needs of various areas.

Lessons:

Levers to the MGP setting up have been identified: a project is more successful when it is initiated by health professionals supported by local authorities, and up for discussion. On the contrary, preconceived ideas about the MGP project complicate the assessment's appropriation.

Key messages:

- Taking into account the results of the assessment helps to propose MGP projects that better match population needs.
- It also improves collective knowledge of public health issues between health professionals and various local stakeholders.

Employment program graduates of internship of higher education institutions of Kazakhstan

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Background:

Employment of graduates of medical universities is one of the traditional problems of health care in the Republic of Kazakhstan (RK). The annual graduation of medical universities of RK exceeds 4500 young specialists. Despite this, as well as the positive dynamics of employment, the health care industry continues to experience a shortage of medical personnel.

Methods:

To take effective measures to improve the employment performance of graduates of medical education organizations, to cover the shortage of medical personnel, an analysis was made of the employment of graduates of internship programs at 8 medical universities for the period from 2014-15 to 2016-17 school years

Results:

For three years, medical schools of RK prepared 12019 people, of whom 8921 people studied under the state and 1343 under the rural grant. The total number of employed was slightly more than half of the graduates-6533, which amounted to 54.4%. At the same time, the number of those employed in urban hospitals is 1.5 times higher than the number of those employed in rural medical organizations. High percentages are persons who have continued their studies in residency/magistracy, and this figure tends to increase every year. The trend towards an increase is maintained by the free distribution index for pregnant women and people caring for children under the age of 3 years, for a total of three years it was 1,452 (12.1%) of a person. At the same time, those employed in rural health facilities are only 19.1% of those who studied under the grant and 31.5% of those who studied according to the rural quota.

Conclusions:

Thus, the percentage of employed graduates, as well as graduates who studied under the state and rural grant, barely exceeds 50%. Even the employment of persons trained in rural quotas in rural health care facilities is only 31.5%. Universities do not fully monitor the employment of graduates, especially those who studied under a state or a rural grant.

Key messages:

- To create and implement an electronic platform with a complete database of students and graduates.
- To monitor employment and track the graduate's work route; to organize employment services at universities.

DN Health workforce development and research

An Evaluation of Midwifery Education System in Armenia

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Background:

Competencies, knowledge and skills of health care professionals largely depend upon their education. Well-educated and competent midwives can improve women's and infants' health related outcomes. The current study evaluated the compliance of the current midwifery education system in Armenia with the global International Confederation of Midwives (ICM) standards.

Methods:

The research team used a qualitative cross-sectional study design with deductive content analysis. Through purposeful sampling we recruited five nursing colleges providing midwifery education in Armenia; two in the capital city and three in different regions. The study population included midwifery students, faculty and administrative representatives of the selected colleges (n = 56). During fall 2018, we conducted observations of midwifery education textbooks and equipment and in-depth interviews and focus group discussions with participants.

Results:

Despite widely used interactive teaching methodology and more than 60% of teaching time allocated for practical learning, students graduated from the program without obtaining essential competencies. Lack of teaching resources, especially in the regional colleges, and lack of quality clinical learning opportunities in hospitals were barriers for students to develop essential practical skills.

Conclusions:

The study recommends the governmental bodies to ensure provision of equity-based distribution of finances and tangible resources between the capital city and regional nursing colleges. The practical component of midwifery education programs need substantial enhancement.

Key messages:

- The lack of teaching resources and access to hospital sites were barriers to obtaining essential competencies for midwifery students.
- In order to develop a sufficient professional skillset, midwifery education programs should arrange comprehensive and structured practical experience for students.

Foreign workers' health in agriculture: assessing health workers' perception and training needs

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Introduction:

Health and safety of foreign workers employed in agriculture and zootechny present several critical areas. The multidisciplinary project 'Livingstone', funded by INAIL and carried out by several Italian universities, aims to address some of these critical issues. One of the project research line focuses on health professionals and has the objective to investigate their perception of the risks to which foreign workers are exposed and their training needs.

Methods:

A 33 items questionnaire is being self-administered to social and health professionals of three Italian regions (Lazio, Lombardia and Campania) where agriculture is developed; the administration phase will last 13 months (2018, April - 2019, May). The questionnaire has been built starting from a literature review; a pilot study have been conducted in a pilot sample in Rome in March 2018. The questionnaire is composed by five sections: general, social and professional information; characteristics of the respondents' foreign patients/users; knowledge about health problems of foreign patients and about possible obstacles in use of health services, with a specific focus on foreign patients working in agriculture and zootechny sector; perception about health and safety risks of these workers; training background and needs, included desired training contents and modalities.

Results:

The research is ongoing. 238 answered questionnaires have been collected yet. 65 of the respondents are General Practitioners; the rest are other health and social professionals. The complete results will be shown during the congress.

Conclusions:

This study will contribute to widen the knowledge about health professionals' perceptions about problems and needs of foreign workers employed in agriculture and zootechny sector. Specific training addressed to social and health professionals will be developed from the observation of their current knowledge and from their reported needs.

Key messages:

- This study will contribute to widen knowledge about health professionals' perceptions about problems and needs of foreign workers employed in agriculture and zootechny sector.
- Specific training addressed to social and health professionals will be developed from the observation of their current knowledge and from their reported needs.

What do health workers think about a population exposed to health inequalities? The Bastogi case

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Introduction:

Previous qualitative researches highlighted that people living in Bastogi - a peripheric area of Rome marked by social deprivation - have difficulties in accessing and relating health services. We explored the healthcare workers' perception of the relationship with such population.

Methods:

A 42 items questionnaire was addressed to the reference Local Health Unit employees, evaluating: context knowledge; perception of the relationship between users and health services and between users and operators; training needs. The association between answers and social characteristics of the respondents has been evaluated through Chi Square Test for categorical variables and T Student Test for continuous variables.

Results:

Questionnaire respondents were 73 (50% of the total employees). 77% reported knowing Bastogi. Adverse social determinants mostly identified (>65%) were economic problems, housing conditions and unemployment, while less people pointed out the poor social support network (38%).

50% assumed that Bastogi inhabitants face health inequalities. 26% claimed to have difficulties in the

relationship with users; 81% considered useful a training activity about the relationship with socioeconomic deprived users. 25% believed the responsibility for the main social problems in Bastogi lies in the inhabitants themselves. Such answer was statistically more frequent among: administrative professionals, professionals with longer length of service, those who deny the existence of health inequalities and those who don't feel the need of training. Further results will be presented during the congress.

Conclusions:

Preliminary results of the survey confirm that the relationship between users from a socially deprived area and the competent services is problematic, and underline the need for training of healthcare professionals on the subject. This need is also perceived by the majority of the respondent personnel.

Key messages:

- We explored the healthcare workers' perception of the relationship they have with a population exposed to health inequalities.
- Interventions and trainings will be implemented to contain this problem.

Midwifery in Germany – The necessity of developing a workforce and service planning approach

Manuela Raddatz

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Background:

Midwifery care in Germany is a legal right for every woman (SGB V). Midwives work employed or freelance in hospitals or in community services, providing maternal care from pregnancy until the end of breastfeeding (Sayn-Wittgenstein 2007). Increasingly, a shortage of midwifery care has been observed, forcing hospitals to understaff or to close their birth units, leaving women and their families without care (Sander et al. 2018). At the same time, birth rates are rising, thus leading to an increasing demand of midwifery care (Destatis 2019). As off today there is no central register for midwives across Germany's 16 states. Therefor the exact number of registered midwives as well as the scope of services provided by midwives are not known (Niedersächsisches Landesgesundheitsamt 2019). Given the present situation, it seems to be imperative to establish effective midwifery workforce planning.

The aim of this poster is to identify already existing health workforce planning approaches and to determine the extent to which those can be transferred to the German system of midwifery care.

Methods:

Health workforce planning approaches, already being used on a national and international level, have been analysed, focusing their applicability to midwifery services in Germany.

Results:

Particular elements of the workforce planning approaches already being used in Germany for registered physicians seem to be adoptable. However, they need to be adjusted and enhanced to ensure the characteristics of midwifery in the German public health services. Internationally used approaches are not readily transferable due to systemic differences in health care systems.

Conclusions:

The development of new specific workforce and service planning approaches for midwifery care in Germany is crucial to meet present and future needs of women and their families during the childbirth period.

Key messages:

- It seems sensible to consider the peculiarities of a healthcare system in midwifery workforce planning.
- Establishing workforce research still represents an important task for midwifery in Germany.

The AAPRISS Platform: Learning and Taking Action to Reduce Social Inequalities in Health to help PHIR

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Today, the reduction of social inequalities in health is on the political agenda in public health. The complex reality of the determinants of these health inequalities remains difficult to understand and translate into practical actions. One of the reasons is that the circulation of expertise amongst researchers, actors in the field, and public decision is not systematic and still too rare.

In 2013, the Federative Institute of Interdisciplinary Research and Studies Health Society (IFERISS) of Toulouse has an interdisciplinary platform (health, the humanities, and the social sciences) that directly offers expertise to public health actors, institutions, and local communities in order to respond to public health issues.

At the request of the actors, AAPRISS can intervene at all stages of a study or an intervention, from conceptual and methodological construction to implementation support, and data analysis and use. In particular, the team has expertise in public policy evaluation, support for transferability according to the key functions/implementation/context (FIC) model, and awareness-raising at the intersection of urban planning and health. The platform is in a multi-year partnership with local authorities, the regional health agency of Occitanie, the primary health insurance funds of Occitanie, and various partners in civil society. Six years after the establishment of the AAPRISS platform, there is a strong demand for support and research from the actors and institutions. However, funding for activities remains uncertain despite the support of the National Cancer League and an increasingly strong network of partners. Mixed structures housing spaces for both research and action, which create a dynamic of Population Health Intervention Research, are showing themselves to be effective and seem to meet a need, but their financial stability is insufficient to sustain their activities and promote sustainable reduction of social inequalities in health.

Key messages:

- Mixed structures housing spaces for both research and action, which create a dynamic of Population Health Intervention Research, are showing themselves to be effective and seem to meet a need.
- But the financial stability of this mixed structures is insufficient to sustain their activities and promote sustainable reduction of social inequalities in health.

Pre-participation screening of the athletes in Turkey: approach of primary care physicians

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Background:

The pre-participation screening is crucial as the risk of sudden death for competitive athletes is higher than that of non-athletes. In Turkey, screening could be performed at the primary health care setting both by family medicine specialists (FMSs) and by general practitioners (GPs). Although there is a guideline, there is no legal regulation for the process. The aim of this study is to evaluate the approach of primary care physicians in pre-participation screening.

Methods:

An online questionnaire based on the Turkish Medical Association (TMA) guideline, and the 14-item Screening Guideline of the American Heart Association (AHA) was delivered to primary care physicians. Knowledge, experience and approach of the physicians were assessed. Self-confidence, application of AHA criteria, accurate referral ratios and further test requests were taken as outcome measures. Descriptive and inferential analyzes were performed and $p < 0.05$ was considered significant.

Results:

Of 214 participants, 39.3% were women, the average age was 44.9 years, the average work experience was 7.9 years. 89.7% of the participants were aware of their authorization, 90.2% had previously given this report, but only 6.5% feels confident. Only 13.1% knows the presence of TMA guideline, and only 23.8% states being educated on the subject at any part of their career. More than 60% of the participants consider further testing necessary in addition to medical history and physical examination. Blood and urine test requests were significantly more for GPs compared to FMSs ($p = 0.026$, $p = 0.011$). Accurate referral decision ratio was only 59.3% with no difference between FMSs and GPs ($p = 0.216$). Work experience had no effect on any of the outcomes.

Conclusions:

As the legal regulations and awareness of the guideline are insufficient, pre-participation screening is not standardized, and this increases tendency for further testing or referral.

Key messages:

- The pre-participation screening of athletes in Turkey is not standardized among primary care physicians.
- Further testing request ratio is high and accurate referral ratio is low.

Key Aspects of Modernizing Public Health Doctoral Program at The University of Georgia

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Structured Doctoral Program of Public Health has been modernized from ‘‘consultation’’ to combined ‘‘Multi-methods’’ teaching module at the University of Full PhD program consists of 180 ECTS, 3 years for the full-time, and maximum of 7 years for the part-time. The programme consists of 60 teaching and 120 ECTS Research component. Doctoral student, together with a supervisor, starts working on his/her dissertation from the 1st academic year/semester of enrollment Transition from ‘‘consultation’’ model to the ‘‘combined multi-methods’’ model advances the learning outcomes, straight research skills, internationalization, modern professional communication.

PH PhD Program aims to prepare a public health researcher who will be able to identify and solve public health issue/problem, produce the best evidence possible and make an evidence-based decisions, create a novelty, and expand the knowledge borders of public health. Self-administrated semi-structured questionnaire were used: How much ‘‘consultation’’ model is effective? What kind of skills are is necessary for scientific carrier?Focus-group discussion was conducted with PhD program graduates. Questions discussed: How you applied acquired skills and knowledge to your work/practice?In focus group discussion employers were asked to discuss what skills and knowledge they are requiring from the employees, if they are considering involvement of local and International experts in teaching process.

98 % of questionnaire students underline the Combined multy- methods with intensive theoretical and practical teaching with international activities. The deep knowledge of scientific methods and project writing skills are very important. Results of researches must be presented at the international scientific conferences and published.

Research methods course was improved (amounts of credits was increased 2 times).The frame of teaching is Combined multy-methods with internationalization involvement and with intensive timeline.

Key messages:

- The learning process consist of Combined multy-method, with deep research methods and internationalization activities. The elements of Research component starts from the 1st semester.
- Result Internationalization.

Evaluation of medical students to interest in the health research in Kazakhstan at 2018

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Background:

Since medical education is significantly different from other conditions of higher education, it is necessary to analyze the influence of the health research component on the quality of training a future health specialist.

Methods:

A quantitative analysis based on the survey. 2 types of original questionnaires were based on the AGREE method: a) to analyze the involvement of medical students, and b) to analyze the teachers of medical universities to integrate health research into the educational process. The survey involved 1,439 medical students.

Results:

85±1.02% of medical students agree that the triangle of science, education and practice is the main principle of doctors. 63±2.76% of students indicate a discussion with the teacher about the latest advances in medical science. 77±3.24% of surveyed students believe that health research is conducted at a good level. 78±5.8% of students confirm a good health research infrastructure at the University. The continuity of the scientific school and the discussion of the health research results was confirmed by 74±1.24% of students.

Evaluation of the participation of teachers in the study showed that 32±3.41% of respondents do health research at the time of the survey. 63±7.1% of teachers agree that the ‘‘science-education-practice’’ triangle is the main principle of doctors. 70±5.17% of teachers indicated the use of Case-based learning, Project-based learning and Research-based learning in their teaching practice.

Conclusions:

The analysis showed a lack of involvement of medical students in health research and a lack of commitment of educational organizations to the principle of the triunity of science, education and practice.

Key messages:

- Medical students who are engaged in research have professional competencies related to the practical use of their knowledge and skills than their peers who are not involved in research.
- Involving medical students in research provides benefits for Universities, medical students and stakeholders.

User typology for workplace health offers

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Background:

Workplace Health Promotion/Management (WHP/M) is not mandatory in Europe. However, it is often considered to be a standard for attractive workplaces, but this does not necessarily result in high use. This opens the question if WHP/M is perceived only as quality criterion, or if the offer per se needs to be adapted. In this study, we therefore analyze the user typology for the WHP/M offers in four organizations

Methods:

A self-administered quantitative Likert-scaled questionnaire was filled in by the employees (N = 237) regarding use of offers, determinants of use, perceived attendance barriers and effects, interests, and demographic questions. We determined user profiles using cluster analysis and here focus on perceived barriers of use, reporting first results.

Results:

We found three clusters that mainly differ regarding intensity and type of perceived barriers. Cluster 1 experiences barriers to be very high, Cluster 2 reports very low barriers, Cluster 3 feels almost no information related, but intensive offer related barriers. Regarding demographics, there are more men in Cluster 2, women perceived barriers more intensively. Employees belonging to Cluster 1 are younger than those in Cluster 2; Cluster 3 is close to Cluster 1 regarding age. Additionally, Cluster 1 is made up of employees who are better educated, have joined the current employer more recently, have a better position and work less hours than those in the other clusters.

Conclusions:

Employees visibly diverge regarding perceived attendance barriers. Current WHP/M offers seem to be better adapted to those with lower position, longer working hours and more experience with the employer - or the employer with them.

The potentials of WHP for integrating all employees have not yet been realized. This is critical should the possibility to us WHP/M offers i.e. play a role for newly hired part-timers or high potentials.

Key messages:

- Companies offering WHP/M need to prioritize reducing offer related barriers and respond to divergent user profiles.
- Workplace health programs do not yet reach their potentials due to attendance barriers.

Nurses' experiences with the Implementation of a Manchester Triage System in an Emergency Department

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Background:

Emergency Departments (ED) are very often confronted with a high number of non-acute patients. This circumstance has negative effects on the quality of care because of limited human resources and infrastructure in dealing with overcrowding. In Spring 2017 an Austrian hospital has implemented the Manchester Triage System to improve the management of patient flows. From the date of implementation the nurses were responsible for the preliminary assessment of the patients. The aim of this study was to investigate the nurses' experiences and attitudes concerning the implemented Manchester Triage System as well as its impact on their work and quality of patient care.

Methods:

A qualitative approach was chosen. In order to get a deep insight interviews with ten nurses were conducted by using an interview guide with open questions. The answers of the interviewed people were recorded, transcribed and analyzed by the qualitative method GABEK (GAnzheitliche BEwältigung von Komplexität).

Results:

The triage process has changed the working hours, processes, collaboration, task responsibilities and stress levels. The triage process itself is defined by the nurses as diversified activity with a high degree of responsibility. Experienced, well-trained nurses guarantee an appropriate preliminary assessment of the patient. Teamwork and backing by nurses and physicians are of importance in the case of unclear patient assessments. Finally, more time is available for acute patients in order to provide them an appropriate care.

Conclusions:

The Manchester Triage System has changed the nurses' working conditions and influences positively the management of patient flow and quality of care.

Key messages:

- The activities of the nurses have changed into diversified tasks with a high degree of responsibility.
- The implementation of the Manchester Triage System has a positive impact on the patient flow and quality of care.

ASPHER V4 Working Group supports the road map for professionalising the public health workforce

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Background:

The ASPHER V4 Working Group (WG) was established in 2016 and officially launched during the 9th European Public Health Conference in Vienna. One of the key objectives of the WG is to strengthen public health capacity development in V4 countries. The WG supports the implementation of the recently reviewed European Action Plan for Strengthening Public Health Capacities (EAP). The EAP's review highlighted the need to focus further action on four enabling Essential Public Health Functions (EPHOs) including human resources for public health. This is why the WG is heavily involved in the recent development of a new Road map for professionalising the public health workforce, one of the products of the recently established Coalition of Partners (CoP) that was convened by the WHO Regional Office for Europe in close cooperation with ASPHER and Maastricht University.

Objectives:

- Supporting the WHO CoP with a focus on development and further implementation of a new Road map for professionalising public health workforce in V4 countries.
- Using a new rapid assessment tool to evaluate the state of the public health profession in the Czech Republic.
- Sharing the report on the current state of public health professions in the Czech Republic with the WG and using it as a comparison of the current state in all V4 countries.

Results:

1. Key strengths and weaknesses of the first rapid assessment of the current state of the public health profession in the Czech Republic are presented.
2. Key actions are proposed for the WG: a) Preparation of a grant proposal to the International V4 Fund and b) Continuing active involvement in CoP activities.

Conclusions:

The rapid assessment tool for evaluating the state of the public health profession was successfully implemented in the Czech Republic with the close cooperation of academia, researchers, policy makers and practitioners. The summary confirms that further work on the professionalization of the public health workforce is needed.

Key messages:

- ASPHER V4 WG is strongly involved in the development of a new road map for professionalising the public health workforce, coordinated by the WHO CoP, ASPHER and Maastricht University.
- Summary of the first rapid assessment of the current state of the public health profession in the Czech Republic confirms the importance of further action in this area of work.

Socioeconomic and health differences in physical activity: a cross sectional study in Lithuania

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Background:

Physical activity (PA) influences people's individual health and quality of life and contributes to prevent non-communicable diseases. Research shows that only one third of the EU inhabitants satisfy the World Health Organisation's recommendations for PA levels. Global decline in PA levels is associated with economic development, an increase in urbanization, communication technologies and the use of passive modes of transport. The aim of the study was to assess the levels of PA depending on socioeconomic factors and health among adults.

Methods:

A cross sectional study of a random sample of Kaunas residents was conducted to investigate the habits of PA. A representative sample of 1111 individuals who completed the questionnaire were included in the study. Validated questionnaires were used to collect data. Multivariate logistic regressions were used to assess the relationship between the levels of PA and socioeconomic factors and health, adjusting for confounders.

Results:

Our findings showed that non-workers were three times (OR 3.16; 95% CI 1.23-8.13) more likely to reach the levels of recommended PA compared to workers. The results revealed that car disposal and the increase in body mass index (BMI) were the two most important factors that reduced odds of reaching recommended levels of PA by 64 % (OR 0.36; 95% CI 0.14-0.93) and 13 % (OR 0.87; 95% CI 0.80-0.96).

Conclusions:

The differences in PA levels by individual socioeconomic factors and health were investigated in this study. The European Commission actively promotes Sustainable Urban Mobility Planning by developing guidelines for the local authorities to promote active mobility and increase PA.

Key messages:

- The study highlights the importance of considering different individual characteristics when assessing PA and evaluating related health effects.
- It is important to improve the accessibility of urban areas and create cleaner and more sustainable transport modes to increase PA.

DO Healthy living and health promotion

Health promotion, community-campus-local authorities partnership and new health professional profile

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Issue:

Meinier is a county near the city of Geneva, Switzerland. Following an initial study aiming to identify its residents' health needs, the local authority formally engaged our Institute to try to resolve the problems disclosed, which were of socio-economic and psycho-social nature. Our objective was to demonstrate that a collaborative approach to implementing effective intersectorial health promotion works at county level and that there is a need for a new role for public health, working at county level.

Description of the problem:

Numerous meetings of the inhabitants gradually developed into a community-wide dialogue, leading them to clearly define their requirements. Old people felt isolated and wished to remain in the village, rather than enter a nursing home elsewhere. Young families could not get established because of a lack of available housing and nonexistent day care facilities for children. Social links between people had diminished. Further difficulties arose from poor mobility.

Effets:

Given these findings the inhabitants drew together to develop a more equitable society, in a partnership between the authorities and our Institute. A participative intersectorial approach allowed a global program to be put together, which particularly united housing, urbanism, ecology and mobility. The project, driven completely by community participation, is now in its fourteenth year, its 40 million dollar budget adopted by community vote.

Results:

One prominent aspect is the new village center, with its sheltered housing for the elderly, affordable accommodation for young families, child day care, a games library, shops and a restaurant as well as an intergenerational park and living space.

Lessons:

The learning and experience gained in terms of community participation and of behavioral and social health determinants has been very important for all concerned.

Key messages:

- A collaborative approach to implementing effective intersectorial health promotion works at county level.
- There is a need for a new health professional profile (the county practitionner).

The Relationship between strength and academic performance: A new reason to promote physical activity

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Background:

Experimental studies have determined that higher strength values are associated with more efficient cognitive function and better academic performance. In spite of this, the universities in Colombia are decreasing the time available for physical activity in favour of increasing the time devoted to theoretical subjects. This is one of the reasons why in Colombia, only 18% of young people complied with the world recommendations of physical activity. To examine this problem, the objective of this research was to establish the relationship between strength and academic performance in university students.

Methods:

A cross-sectional study was developed in 135 (21.8 ± 4.5 yr; 78.69 ± 9.1kg) students of the fifth semester of the Areandina University in Bogota, Colombia. Each participant developed incremental protocols to determine the maximum weight that he or she could move in six different exercises: squat in smith machine, leg press, leg extension, bench press, pull down and military press. The average of the results of these tests was taken as the value of maximum strength. To determine academic performance, the average of the scores accumulated in the five semesters of their university studies was evaluated. Pearson correlation coefficient was used to find the linear relationship between strength and academic performance.

Results:

Overall, 70.3 % of the participants were men and 29.7% were women. The results of the maximum strength tests were significantly higher in the male group than in the female group ($P < 0.05$). Academic performance was similar in both genders ($P > 0.05$). A positive correlation was established between maximum strength and academic performance. ($r = 0.64$ $P < 0.05$).

Conclusions:

The conclusion of this research was that there is a significant relationship between strength and academic performance. These results are fundamental to justify the inclusion of spaces for the promotion of physical activity in public and private universities.

Key messages:

- Universities are institutions that only focus on academic training and generate contexts in which sedentary behaviours are promoted.

- Sedentary lifestyles are a public health problem in Colombia.

Health promotion among the unemployed: an international systematic review

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Issue:

The interactions between unemployment and health create a need for specific interventions for health promotion and prevention.

Description:

This overview provides information on how health promotion for the unemployed has been approached with an analysis of controlled intervention studies between 1996-2016. The literature search consulted 11 international databases in medicine, social sciences and psychology. A total of 30 health interventions for the unemployed were identified, with 43 articles that included the effects of intervention.

Results:

A controlled-study design was used in 14 studies. The health promotion measures were generally based on individual counselling, case management, training or group services. The overview demonstrates the breadth of variation in target groups and types of measures. Their result indicators for health and labor market integration vary substantially. Effects are rather moderate or low in magnitude and the effect mechanisms often remain unclear. Effects weaken over time. While success is more common in the areas of health, physical activity, nutrition and stress relief, there was no impact on smoking behavior.

Lessons:

A significant evolution can be observed in the quality and quantity of health promotion over time. There is a need for further research on the effectiveness and sustainability of interventions.

Key messages:

- There is evidence of improved health and labor market integration for established approaches like the JOBS Program and JobFit.
- Intervention strategies should be developed that take account of the diversity of the unemployed and their different needs.

Health literacy of commercial industry managers: an exploratory qualitative study in Germany

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Background:

Managers have been neglected in health literacy research. There still is little known about the health literacy status and needs of commercial industry managers. This study reduces the existing knowledge gap by presenting findings of an exploratory qualitative study.

Methods:

We conducted 23 separate semi-structured interviews of managers from all management levels (low, middle and top) and experts in the field of health management and/or personnel management. The qualitative interviews were analysed according to Mayring's content analytic approach using MAXQDA.

Results:

The findings indicate that managers do have considerable information levels about existing health topics and relevant problems but have difficulties of discernment as to which sources of information can be activated or accessed in a timely fashion due to work and information overload. Even those who devise strategies often fail in implementing health-literate behavior. Experts and managers had fairly consistent views on the importance of health literacy among managers. Most agreed that mental health was neglected and that company conditions were important in influencing the ability to act in a way that promoted health literacy. The findings also show that strengthening of managerial self-perception, self-regulation and self-control, raising awareness and ability to take personal responsibility for one's own health, developing skills in handling large amounts of information and fostering open and trusting communication are all essential.

Conclusions:

The findings provide specific points which are important for promoting health literacy among managers. The study underscores the need to incorporate and integrate different perspectives in the implementation of health literacy interventions. To develop health-promoting companies, further research has to provide guides to action for managers and investigate ways in which health literacy can be promoted among managers on all hierarchical levels.

Key messages:

- Industry managers in this study agreed that their mental health has been neglected and company conditions were important in influencing the ability to act in a way that promoted health literacy.
- This study reduces the knowledge gap about the health literacy of managers. Further research should focus on promoting mental health and providing guides to action for managers and companies.

Who has access and who participates in parkrun? - implications for selecting future event locations

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Background:

parkrun is an international organisation which hosts free, weekly volunteer-led, running events. More than 300,000 people participate across 21 countries each week. The present study investigates how access to, and participation in, parkrun events varies across England. We go on to make policy recommendations for new parkrun event locations, in order to maximise geographical access and participation whilst taking account of the impact on inequalities.

Methods:

We combined location data of census areas, parkrun events and public parks in England. For the census areas, access was defined as the distance of the area's centroid to the nearest parkrun event, and parkrun UK provided information on 2018 participation rates per area. Linear regression was used to investigate the effect of deprivation on access, and the effect of deprivation and access on utilisation. We propose a flexible algorithm for identifying optimal new parkrun event locations and provide two sample sets of recommendations.

Results:

The median distance to the nearest parkrun event was 3.4 km, but the distribution was heavily skewed: for approximately 10% of the population, the nearest event was more than 10 km away.

Despite statistical significance, the relationship between deprivation and access was very weak. However, access and deprivation had a considerable effect on participation: less deprived areas, and areas with good access had higher participation rates. The best locations for new events are contingent on what parkrun aims to maximise. We demonstrate that optimal locations for maximising equitable geographic access differ from locations for maximising participation.

Conclusions:

Access to parkrun is generally good and is similar across socioeconomic groups, but participation is markedly higher in less deprived areas. Our algorithm can be used by parkrun to further improve access for deprived communities. However, better access alone is unlikely to reduce inequities in participation.

Key messages:

- In England, access to parkrun is generally good, and our algorithm can be used to further optimise it.
- However, better access alone is unlikely significantly increase participation from deprived areas.

Exploration of perceptions of health of low SES citizens in the Netherlands

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Background:

Health promotion programs (HPPs) have not yet succeeded in substantially reducing the health gap between higher and lower socioeconomic groups. It is thus a challenge to develop more effective strategies, based on an ecological perspective. To develop such strategies and activate citizens, this study explores citizens' perceptions of health and what they need to improve it.

Methods:

Setting Community HPP Voorstad on the Move (VoM) (July 2016-Jan 2020) in a district (+-11,000 inhabitants) in Deventer. Inhabitants' socioeconomic status (SES), perceived health status and lifestyle are low relative to other city districts. Study design: A qualitative study of 11 community groups (n = 89) participating in two focus groups. Concept mapping was used to cluster and prioritize health perceptions. Social Practice Theory (SPT) guided the analysis of needs to change health-related behavior.

Results:

''We don't assume that everyone has the same idea about health, do we?'' (citizen)

Participants differed in age (16-82), cultural background (17% non-Dutch origin) and type of group activity. High-ranking dimensions of health are social relations, physical activity, a positive life attitude, healthy eating and empowerment. To improve health, social support from family and friends and self-confidence were the main needs. Physical impediments, (chronic) illness and financial aspects were also mentioned as barriers. The focus groups contributed to new activities as part of the VoM program facilitated by a health broker: e.g. a swimming group, biking buddies, social meetings.

Conclusions:

Citizens perceive health as multidimensional, encompassing the physical and social environment, lifestyle behaviors, positive attitudes and being in control. Using SPT to unravel these needs in terms of meanings and competences helped to facilitate citizens' active involvement in health-promoting activities.

Key messages:

- Low SES citizens perceive social relations, physical activity and a positive life attitude as important dimensions of health.
- Insight into citizens' meanings and competences about health behaviors facilitates the development of health-promoting activities.

The structure and forms of physical activity in the City of Zagreb 2O14/2015

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Background:

Physical inactivity is one of the biggest public health problems of the 21st century. It is carried through walking, cycling, job, sports, recreation. The aim of this paper is to evaluate the physical activity of the citizens of Zagreb according to sex, age and the type of physcal activity. Health-Enhancing Physical Activity recommendations are at least 150 of moderate or 75 vigorous minutes activity per week.

Methods:

The research has been conducted by analyzing the data gained from the European Health Interview Survey (EHIS 2) from the World Health Organization that was carried out in Croatia during 2014. and 2015. There were collected the data on the frequency, duration and type of physical activity in the City of Zagreb. The target population was aged over 15 and included 446 inhabitants (188 men and 258 women) of the City of Zagreb.

Results:

24,5% of the total number of physically active persons exercise between 150 and 300 minutes per week. 45, 0 % respondents walk 10 to 29 minutes daily, 27, 1% walk 30-59 minutes daily, 14, 9% walk 1 or more hours a day. 1,2% respodents spend less then hour, 13, 6% spend 1 hour and 59 minutes, 18, 3% spend 2.00-2.59 hours and 8, 3% spend 3-3.59 hours on sport and recreation per week. 13, 8% of citizens spend 10-29 minutes a day cycling, 30.1% cycling 30-59 minutes a day, 12, 2% cycling 1 hour to 1 hour and 59 minutes and 2.4% spending more than 2 hours a day on a bicycle. When doing a professional job or work at home 43, 7% of respondents mostly sit or stand, 32,3% use moderate physical effort and 1, 5% of people perform hard work. 14.4% of respondents are engaged in sports, 11.9% cycling and 71, 9 % respondents walk 3-7 days a week.

Conclusions:

Zagreb's citizens are not sufficiently engaged in physical activity and carry out physical activity mainly while doing the job and walking. But those who are active meet weekly recommendations for duration of activity.

Key messages:

- Physical activity is one of the key health factors and one of the most effective ways of preventing chronic non-communicable diseases.
- There is a need of more public health interventions in order to promote recommended frequency, duration and different types of physical activity.

Impact of community gardens on the sustainability of lifestyles: baseline data of the JArDinS study

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Introduction:

Despite growing evidence for the multiple health benefits of community gardening, longitudinal studies based on quantitative data are needed. JArDinS is a quasi-experimental study aimed at assessing the impact of community garden participation in the adoption of more sustainable lifestyles.

Materials and **Methods:**

Gardeners starting gardening in a community garden in Montpellier (France) were recruited in 2018. Volunteers with no experience in community gardening and matched for age range, gender, household income and household composition were recruited in a control group. A recruitment goal of 80 participants per group was determined to detect a 30% increase in F&V supply in the gardeners group. Participant were issued with three tools: a Food Supply Dairy to collect data on monthly household's food supply, a triaxial accelerometer to measure physical activity and an online questionnaire on mental and social health, sensitivity to food waste, and connection with nature. Measures have been collected at baseline and will be repeated 12 months later. Data collected are examined conjointly to assess the sustainability of lifestyles in its social/health, environmental and economic dimensions. Change of outcomes after 1 year will be compared between the natural experiment and the control groups, to evaluate the effect of access to a community garden on the sustainability of lifestyles.

Results:

A final number of 77 participants per group were enrolled at baseline, which is 4% less the original recruitment goal. Baseline data for the natural experiment group and the control group are currently being analysed and will be presented.

Discussion:

This study will provide valuable information about the potential of community gardens to favor sustainable lifestyles, based on a robust quasi-experimental design allowing causality evaluation. Findings could help developing policies toward more sustainable urban planning favoring both human and environmental health.

Key messages:

- For the first time, the JArDinS study will allow testing, the impact of community gardens on the sustainability of lifestyles.
- Results will help orient urban planning decisions towards healthier options.

Smoking behavior and exposure to tobacco smoke in Split-Dalmatia County

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Background:

Tobacco use is the leading preventable cause of death, which is why a number of measures to reduce its use are carried out in the world. That's why the aim of this study were to show the data on smoking behavior and the exposure to the tobacco smoke of the inhabitants of the Split-Dalmatia County, which represent the starting point in the creation of public health interventions

Methods:

Via European Health Survey 2014/2015 (EHIS) the data on the smoking behavior and exposure to tobacco smoke in the Split-Dalmatia County were colected. The targeted population was aged 15 and over. The survey included 267 inhabitants (141 men and 126 women) of the Split-Dalmatia County.

Results:

The overall sample shows that the daily smokers are 22.43% of the population, men 25.71%, and women 18.69%. Occasionally smokes 3.04% of the population (2.14% of men and 4.06% of women), while non-smokers are 74.52% of the population (77.23% of women and 72.1% of men). Tobacco products consumed are mostly cigarettes (97%). More than half (52.63 %) smokes more than 20 cigarettes a day. According to the survey results, more than half of the population (61.04%) has never or nearly never been exposed to indoor smoking, men rarely (56.03%) compared to women (66.1%). Less than one hour was exposed to 17.74% of the population (21.55% of men and 13.91% of women) and one hour and more 16.45% of the population (18.10 men and 15.65 women).

Conclusions:

Indicators of smoking behavior and exposure to tobacco smoke are somewhat more favorable to residents of the Split-Dalmatia County than in the total population of Croatia. Despite the measures taken for years in Croatia, these indicators are still unsatisfactory. Existing measures need to be re-examined and strengthened to overcome this important public health problem as successfully as possible.

Key messages:

- In order to reduce the prevalence of smoking and improve the health of its population, Croatia needs to strengthen and adopt additional policies on tobacco control.
- One of the measures would certainly be a ban on smoking in public places, which could, among other things, have a significant impact on denormalising smoking in the community.

The relationship between sleep quality and nutrition of medical school students in a city of Turkey

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Background:

Students need quality sleep and regular feeding during an intensive training proces. The aim of this study was to determine the sleep quality of Faculty of Medicine students and whether there is a relationship between sleep quality and eating attitudes and habits.

Methods:

In this cross-sectional study; a face-to-face questionnaire was administered to 352 students who attending Inonu University Medical Faculty between January and March of 2019. The sample group is stratified according to class sizes (total 1665 students. The sleep quality and eating behaviors of students were questioned. For purpose, Pittsburgh Sleep Quality Index (PUKI, developed by Buysse et al,1989), and Eating Attitude Test (EAT,developed by Garner et al 1982) was used to assess quality and disorders. Kolmogorov Smirnov normal distribution test, Mann Whitney U and Kruskal Wallis test were used in analysis of the data.

Results:

The mean age of the students was 21.5 ± 2.5 and 54.3% were female and 45.7% were male and 25.0% smoked cigarette. 64.4% of the study group had normal body mass index. The median value of the PUKI (cut of point is 5.0 and under 5 is good) score by gender is similar with 6.0 (1.0-15.0). The median value of the PUKI score was 6.0 (1.0-16.0) in social media / internet users and 5.0 (1.0-13.0) in non-users. According to Internet / social media users before going to sleep, the difference is significant (p: 0.016). The difference between cigarette smoking and median value of PUKI was significant (p: 0.029). there was a difference between classes in favor of upper classes in terms of EAT values (p = 0,046). 12.2% of the students are at risk of Blumia and 10.8% are at risk of Anorexia. There was no significant but positive correlation between the PUKI and EAT (p = 0.074, r = 0.096).

Conclusions:

In general, the students' sleep quality and eating attitudes and habits were found close to the cut-off points accepted by the tests. But blumia and anorexia is significant. This study was supported by the Research Fund of the Inonu University (No. 1792)

Key messages:

- Social media / internet usage of students before going to sleep affects sleep quality significantly.
- Although 64.4% of the students have normal body mass index, eating disorders (bulumia and anorexia) risk are noteable.

Misconceptions, not evidence guide occupational physicians' decisions on legionellosis prevention

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Introduction:

Legionnaire's diseases (LD) is a significant cause of community-acquired pneumonia. An increasing number of cases has been linked with occupational exposures. The aim of this study was understanding knowledge, attitudes and practices of occupational physicians (OPh) towards LD.

Methods:

A questionnaire-based cross-sectional study (April 2019), collecting a convenience sample of OPh operating in the Parma Province. Knowledge status (KS), Risk Perception (RP), and actual participation to the LD risk assessment were assessed. Multivariate odds ratios (mOR) for factors associated with participation to the LD risk assessment were calculated by means of a binary logistic regression analysis.

Results:

80 OPh participated to the survey (76.9% participation rate; mean age 48.2±11.2 years): even though the majority of them assisted at least one enterprise at potentially high risk for LD (i.e. 41.4% retirement houses, 27.1% water treatment plants including spas and pools, 25.7% hospitals) only 42.9% had participated to the LD risk assessment. The majority of OPh did not acknowledge diabetes (52.9%), cancer (65.7%), alcoholism (77.1%) as risk factors for LD, while a large share of OPh did not recognize hospital (50.0%), retirement houses (48.6%), swimming pools (48.6%) and spas (35.7%) as high risk environments. Moreover, participants underestimated both actual frequency (>1000 cases/year) and severity (lethality 10-15%) of LD in Italy, and occupational RP was not coincidentally low (43.2%±20.3). Participants reporting better KS were more likely to participate to the risk assessment (mOR 4.82 95%CI 1.06-21.94), while RP was eventually unrelated with preventive practices.

Conclusions:

OPhs were diffusely affected by significant knowledge gaps on the actual risk factors for LD. Their misperceptions have the potential to negatively influence daily practice, impairing prevention of LD on the workplaces, and should be specifically targeted by information campaigns.

Key messages:

- Occupational Physicians were affected by significant knowledge gaps, particularly on individual and occupational risk factors for legionnaire disease.
- In order to better address the increasing threat of Legionnaire Disease, Occupational Physicians should be specifically targeted by information campaings.

Clear proceedings as workplace health promotion. Supervision and management tools in rural Uganda

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Health centres and supervision teams in rural/poor settings in developing countries are affected by limited resources, uneasy reporting to higher level of power and unclear proceedings to filling the gaps. Inconsistency in supervising visits lead to mistrust. Supervisees react with resistance or indifference. Supervisors react behaving as policemen. In Uganda, Oyam Health District, february-august 2018, actions were taken in order to solve conflicts, sustain quality, improve interactions. Sharing the concept and the implementing process could inspire colleagues engaged in workplace health promotion.

Key points were informed by direct observations, talks with staffs, literature review, ugandan Ministry of Health official directives and tools, NGO's adaptations. Selected issues were discussed during two workshops held in april '18 involving all the concerned staff: 100 people. Agreement reached, based on a 3 (gap-act-resp) 5 (0-4 grading) algorithm, re-designed tools were able to reduce aléa during inspections, grade the gaps, guide actions and to address the appropriate level of responsability. User friendly reporting formats, database and unicode for linkage were designed ex novo. Information flow was agreed with the Health District Authorities.

After the learning period, staffs felt empowered about resolving gaps and less stressed advocating higher authorities. Conflicts lost harshness. Satisfaction was captured by a self-filled anonymous questionnaire in june 2018 (n = 80, 12 core questions, 0-4 likert scale, mean >3, SD < 1, median = 4, open sentences positives). Quality improvements of health care services were measured by the Ugandan Ministry of Health independently.

Unclear targets, shortage of means, ineffective communication flows reduce quality and trigger frustration. Sustaining transparency, organizing communication flows and proceedings, sourcing staff's experience could enhance success both in reaching targets and promoting relational health at workplace.

Key messages:

- Transparency, shared decisions, clear communication, awareness of the aims and mastership are able to reduce conflicts and misunderstandings, sustaining a healthier workplace relational environment.
- People spend 60 to 80% of their active time at workplace. Well designed tools, policies and information flows, could be effective health enhancer as well. Work style is a lifestyle.

Re-imagining risky health behaviour as salutogenic practice

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Background:

Much has been written about the problematic risky health practices that some young women in western cultures engage in defined as, for example, drinking alcohol to excess, smoking and taking drugs. Conversely the literature is more limited with regards to the meaning that young women attribute to such 'unhealthy' practices. Exploring and understanding meaning is important in order to design more effective health promotion interventions.

Methods:

This paper will present findings from 22 in-depth interviews with young women aged 18 - 14 years in post-compulsory education who were invited to talk about health and risk. Discourse analysis was used to explore the data drawing on feminist and governmentality perspectives.

Results:

The data presented complex constructions of risk taking in health drawing on intertwined discourses of moralism, healthy citizenship, idealised femininity and health as a gendered pursuit. However, the young women also constructed their 'unhealthy' practices in alternative, more agentic, resistant and philosophical ways.

Conclusions:

Based on these latter findings it is proposed that some risky health behaviours should be interpreted as salutogenic rather than pathogenic in nature. Subjective constructions of risky health practices as salutogenic should be taken into account in risk communication strategies and interventions in public health.

Key messages:

- Exploring and understanding meaning is important in order to design more effective health promotion interventions.
- Subjective constructions of risky health practices as salutogenic should be taken into account in risk communication strategies and interventions in public health.

The Comprehensive Community Engagement Framework for Health and Well-being

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Background:

Community engagement (CE) and empowerment are required to support the sustainability and effectiveness of actions to reach Agenda 2030. There is a need to guide CE for health and well-being to take action on important societal challenges such as the growing burden of non-communicable diseases (NCDs) and health inequities. The framework proposed in this study has been designed to assist professionals, practitioners and communities to effectively engage.

Methods:

A narrative review of existing grey literature, policy papers and models related to CE was performed. This guided the development of a systematic search strategy, performed by two researchers, which reviewed CE approaches and key influencing factors. The search strategy captured different terms used for CE.

Results:

A total of 27 studies of different types, from around the world, were identified for inclusion into the review. The study compiled a set of widely-used theories and approaches to CE. Key factors such as governance, trust, accessibility and sociocultural contextualisation were also identified as important for the success of CE initiatives. Subsequently, the Comprehensive Community Engagement Framework (CCEF) was developed. It combines theoretical and empirical principles, proven participatory actions and key factors to produce evidence-based health and well-being outcomes across different sectors and levels of society.

Conclusions:

This study has formed the basis of a forthcoming WHO report on CE. The CCEF enables the operationalisation of CE to guide for possible practical approaches to planning, initiating, sustaining and evaluating CE processes alongside the community. It can be used by the health sector as well as the non-health sectors to address health, well-being and broader societal challenges.

Key messages:

- The CCEF can be used to engage health and non-health stakeholders to tailor CE processes, increase impact of interventions and policies, building capacity and empowering communities.
- The proposed framework provides the first comprehensive guidance to conduct community engagement.

Patient education in the context of Parkinson disease cared for with deep brain stimulation

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Background:

From the 1960 on, Western societies have developed patient education. In France, patient education is part of the public health Law since 2009. Research on patient education has developed in the field of social sciences and humanities in order to understand the social dynamics on which it is based, its intended implications and actual results. As patient education may contribute to an evolution of health care services, this research gives rise to a knowledge that is important to ground public health policies. Funded by IReSP, the present study is innovative as it explores the contemporary development of patient education in the field of Parkinson disease; analyses the teaching models that grounds patient education in this field; examines the implications of technological care (here, deep drain stimulation) in terms of transmitted knowledge and acquired skills.

Methods:

1. Review of literature.
2. Conceptual analysis of the teaching models (and tools) used in training sessions.
3. Ethnographic work (observations of training sessions; qualitative interviews with health professional and patients) - multi-centric perspective (Paris, Nantes, Toulouse).

Results:

- Historical reconstitution of the development of patient education in the context of Parkinson disease worldwide, with a focus on the French context, and its actors.
- Identification and examination of a variety of goals assigned to patient education.
- Identification and examination of the teaching models (and tools) used in training sessions.

Conclusions:

Patient education in the field of Parkinson disease shows a great variety of educational practices and of transmitted knowledge. The analysis of its teaching models (and tools) and of the place devoted to technological care in the training sessions show the necessity to better clarify the goals assigned to patient education (patient autonomy, patient observance, emergence of the expert patient).

Key messages:

- A clarification of the goals and teaching models of patient education is needed.
- A specific attention must be paid to patient education in the context of technological care.

Health Promotion: a multidisciplinary analysis of the factors affecting practices of professionals

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Background:

The coordination and degree of involvement of health professionals is essential for the success of the implementation of health promotion programmes.

We belong to a regional multidisciplinary research group on Health Promotion. The aim of this study was to better ascertain how to empower the health professionals and general population.

Methods:

A qualitative study was conducted among doctors, pharmacists, nurses, psychologists and veterinarians between March 2017 and December 2018. Six focus groups, with 32 women and 20 men purposively selected, were formed to determine the barriers and facilitators for the implementation of Health Promotion in their daily work and to assess their recommendations. Theoretical saturation was reached, and validity of the study was ensured by triangulation.

Results:

The main barriers were: lack of training on Health Promotion which led to demotivation and distrust of own capacities, work overloaded and not valued neither by colleagues nor institutions, weak coordination between care and professional levels, inexistence of common guidelines, a health model based on disease and not addressing the social determinants of health, and, finally, legislation not being adequate. Volunteering, motivation and commitment of professionals were the most outstanding facilitators. Participants highlighted the need for all health professionals to be trained and to improve the budget for Health Promotion. They proposed that all health-related university degrees should incorporate a subject on Health Promotion. Likewise, better coordination between care and different professional levels is required, and the existing legislation should be enhanced for better promoting health.

Conclusions:

The Health in All Policies approach should be provided with enough resources and consider all health disciplines. Further multidisciplinary studies are needed to make the system more people-centred.

Key messages:

- More training of health professionals' skills and improved budget are required to implement health in all policies.
- Health Promotion policies need coordination and multi-disciplinary guidelines.

Health relay students' goals, training and assessment: result from a French national consensus

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Issue:

Health relay students (HRS) is one of the prevention policy rapidly increasing for the French students. It is mainly based on peer effects, peer to peer communication, but the state of play show very various practices.

Description of the problem:

The variety of practices may imply heterogeneity, and actions that are too disparate. In October 2016, the national association of directors of Health Services for Students (SSU) decided to make a formal consensus process (based on single scripting strategies developed in parallel by 10 to 20 people) involving 61 persons (physician, nurses, prevention officer, members of prevention associations) from 29 French universities and based on three axes: goals; training and assessment.

Results:

No disagreement was left. The goals must be validated by the SSU, as it is the unit that is able to link students 'associations wishes and health policy objectives. This need a constant dialogue with the university board, students associations, local authorities and health administration. The HRS are also important to help to know the students practices, notably thanks to their presence on social networks. Institutional policies for HRS must be consistent to the goals, and HRS must be managed by specific prevention officers. Training always associate health education topics and health prevention knowledge. It may be more or less intensive according to the goals, but need the help of association of health prevention and a validation by the SSU. HRS must be diverse, in genders and type of studies. The training must encourage HRS autonomy and creativity in their actions, while accepting to respect the University health policy. Creativity means also to open any way of communication wanted by HRS, such as social networks.

Assessment is based on lean management, HRS satisfaction and University satisfaction (institution as well as teachers, administrative workers and students). HRS empowerment is perhaps the main criteria of assessment.

Key messages:

- Health relay students policies are very varied and need a consensual framework under the control of health services for students.
- Training must associate health education and prevention objectives, develop students' empowerment.

Age-related and seasonal change in serum osmolarity and water intake in a healthy population

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Background and aim:

Few studies have clarified the seasonal and age-related change of serum osmolarity and water intake, which is thought to be associated with heat stroke and ischemic stroke. We investigated the association between them in a healthy population.

Methods:

We conducted a cross-sectional study using database from Kobe Orthopedic and Biomedical Epidemiologic (KOBE) Study. Among 1138 healthy Japanese participants in the baseline survey, 1010 (women 704 and men 306) participants were eligible for the present study. Daily non-alcohol drink (NAD) intake was estimated according to food frequency questionnaire. Alcohol beverage and water in the meal or soup were excluded from the counting. Serum osmolarity (Osm/L) was calculated by Worthley's formula: 2 (serum sodium (mEq/L)) + (blood urea nitrogen (mg/dL))/2.8 + (glucose (mg/dL))/18. The seasons the surveys were conducted were categorized into 4 groups, March-May (Spring), June-August (Summer), September-November (Autumn), and December-February (Winter). The association between serum osmolarity and daily NAD intake was analyzed using linear regression models.

Results:

The seasonal change was observed in the serum osmolarity and daily NAD intake; serum osmolarity increased in spring and summer and daily NAD intake increased in summer. The serum osmolarity increased by aging in any seasons, while daily water intake didn't. There was no significant association observed between serum osmolarity and the daily NAD intake, even after adjusting for sex, age, and season.

Conclusions:

Serum osmolarity showed seasonal and age-related changes, but the serum osmolarity in subjects who had the daily habit of high NAD intake was not necessarily low.

Key messages:

- Serum osmolarity increased by aging and in spring and summer.
- Serum osmolarity was not associated with non-alcohol drink intake.

The Turkish adaptation of the family and nutrition and physical activity (abfa-tr) screening tool

Merve Çolak

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Background:

Assessing the dieatary and physical activity state of the family is important in determining the causes of obesity in the child. The aim of this study is to adapt The Family Nutrition and

Physical Activity Screening Tool (FNPA) to Turkish and evaluate its reliability and validity.

Methods:

In this methodological research, mixed probabilistic sampling methods were used. The sample size was not calculated and it was aimed to reach all of the 1126 students and families in the three primary schools with different socioeconomic status (high, medium, low) in Uskudar, Istanbul. A total of 727 students' and their families' data were collected. Research data were collected by a two-part questionnaire. Survey forms were composed of an introductory information form and the Turkish version of the (FNPA). The low total score on the scale means high-risk family environment and behavior, and the high total score means a more positive family environment and behavior. Prior to the implementation of the scale in the field, a pilot application was made.

Results:

The Cronbach alpha coefficient for the internal consistency of the scale was 0.724. The test-retest reliability coefficient of the scale had a medium to very high level ranged from 0.422 to 0.925. The Kaiser-Meyer-Olkin test result of the 20 questions in the scale was found to be appropriate as 0.771. To evaluate the validity of the content, relationships between the scale score and the answers given the questions about the eating behaviors of the family which were not included in the scale. When these relationships were evaluated, the mean scores of those who had regular breakfast were significantly higher (P = 0.001).

Conclusions:

The study shows that the ABFA-TR scale is a valid and reliable measurement tool for Turkish population.

Key messages:

- It is likely that home environments and parental behaviors with interchangeable risk factors for obesity and overweight may alleviate or aggravate the potential risk of obesity.
- The development and use of measurement tools related to the family environment as an element of obesogenic environment are among the important steps taken to fight obesity.

Measuring health literacy: performance-based versus perception-based measures

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Background:

Many performance-based or perception-based measurement tools of health literacy (HL) have been developed. The aim of this study is to compare the results of performance-based versus perception-based measures of HL in a population-based sample in Florence (Italy).

Methods:

223 subjects were interviewed. To measure HL, HLS-EU-Q16 (perception-based measure of general HL) and NVS (performance-based measure of functional HL) were used. Sociodemographic characteristics were collected.

Results:

The majority of the subjects had high school (36%) or university (44%) degree and gets to the end of the month quite or very easily with financial resources available (69%). Considering age classes, 22% was 18-45, 26% 46-55, 34% 56-65, 18% 66-70 year-old. According to HLS-EU-Q16, 11.8% had inadequate, 55.5% problematic and 33% sufficient HL; considering NVS, 11.7% had high likelihood of limited HL, 28.7% possibility of limited HL, 59.6% adequate HL.

The percentage of people with low HL was higher for HLS-EU-Q16 than for NVS in each category of age class, educational level, and financial resources. For both measures, the percentage of people with low HL increased with age, becoming more similar for older people: for HLS-EU-Q16, from 59.2% for 18-45 to 78.4% for >65 years old; for NVS, from 20% for 18-45 to 67.5% for >65 years old. Similar results were observed for educational level and financial resources: for both tests, the percentage of people with low HL increased with the decreasing of educational level or financial resources; for the worst situations (less than high school diploma or having not enough financial resources), the percentage of people with low HL become similar comparing the two tests.

Conclusions:

Perception-based measure of general HL and performance-based measure of functional HL investigate different aspects, but in the worst situations (older people, low educational level and not enough financial resources) they tend to produce the same result.

Key messages:

- Perception-based measure of general HL and performance-based measure of functional HL investigate different aspects.
- In the worst situations (older people, low educational level and not enough financial resources) they tend to produce the same result.

Self-regulation, norms and alcohol consequences: study on university freshman from four EU countries

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High alcohol consumption is undoubtedly one of the most serious health and public issues across Europe. In addition to other licit and illicit drugs, it causes more than 4% of all deaths in the EU for those aged between 25 and 39. Among protective factors the self-regulation (SR) has been frequently associated with lower levels of risky drinking. On the other hand, overestimated descriptive normative beliefs (NB) may serve as a powerful source of social influence on personal alcohol use. Both SR and NB may be especially important during the period when young adults leave their families and may feel less external control and more freedom to use alcohol what may lead to serious health consequences. Therefore this study explores the associations among SR and NB in relations to alcohol use and negative alcohol consequences.

Data among 2671 first-year college students were collected in 2011. Students from the Czech Republic (n = 357), Hungary (n = 783), Lithuania (n = 928) and Slovakia (603) who filled in the AUDIT test, Self-Regulation Questionnaire and questions regarding NB. Regression models (separately for each country) were computed to test whether different level of SR influences the relationship between NB and alcohol use and between alcohol use and negative consequences.

Overestimated NB were positively associated with risky drinking in all countries and similarly alcohol use increased the level of negative consequences. Moreover, in predicting risk drinking and alcohol consequences, a moderation effect of SR was confirmed as associations among NB and alcohol use and among alcohol use and negative consequences were stronger among those students with lower SR.

The protective effect of SR on risky alcohol and consequences together with social norms approach may potentially improve the intervention accuracy and make it a promising target for intervention among young adults.

Key messages:

- Students from all explored countries highly overestimated the actual alcohol use what was significantly associated with theirs higher alcohol consumption.
- Those students who overestimated the actual alcohol consumption but had higher levels of self-regulation were less likely to drink or report negative alcohol consequences than their peers.

Building a social marketing Strategy to reduce alcohol-related harm in France

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Background:

Alcohol use ranks among the top three risk factors in France, leading to about 40 000 deaths annually. French health authorities wished to renew the public health message about alcohol consumption and build a social marketing Strategy to lower the social and health consequences of alcohol consumption in France.

Objectives:

Two main steps were followed: 1) gathering a group of experts to provide up-to-date low-risk drinking guidelines, 2) building, testing and implementing a social marketing Strategy based on this expertise.

Results:

In 2017, the group of experts established low-risk drinking Guidelines based on both scientific evidence and socially acceptable risks for the French population. They suggested to increase awareness on alcohol-related harm as well as on the new Guidelines. In 2018, a social marketing Strategy was set up by Santé publique France, the French national public health Agency. Qualitative and quantitative pretests allowed to develop understandable and potentially effective communication materials consisting of the following message: ''To protect your health, no more than 2 alcoholic drinks a day, and not every day''. A web-based brief intervention to assess a person's alcohol consumption was developed, based on a previous tool whose effectiveness had been demonstrated. In 2019, the Campaign was launched: health professionals were informed at first, followed by a national mass media Campaign that was broadcasted for 3 weeks, targeting the general population (TV, radio, press, the Internet).

Conclusions:

It is the first time in France that such a global Strategy is set up to promote an alcohol harm reduction message. A robust evaluation is in progress but this structured approach seems feasible and reproducible abroad.

Key messages:

- In France, an alcohol harm reduction Strategy has been built up and implemented, based on scientifically-established Guidelines.
- The social marketing campaign is rigorously evaluated to assess its impact and portability.

Perceptions of health professionnals in a French social marketing campaign against smoking

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Background:

In 2016, Santé publique France, the French national public health agency, launched a social marketing campaign aiming at triggering quit attempts among smokers: ''MoisSansTabac'', inspired by the British ''Stoptober''. Every year, smokers are encouraged to quit smoking for 30 days in November, health professionals are encouraged to participate in the campaign to support them. In 2018, pharmacists received a poster (''Here, we help smokers stop smoking'') and self-help kits to distribute to smokers. Measuring the perceptions of health professionals is crucial to have a complete overview of the impact of the campaign and to identify ways of improvement.

Methods:

A qualitative evaluation of the 2018 edition has been performed to collect the perceptions of general practitioners (GPs) and pharmacists about the intervention and services provided through the campaign (quitline, website, mobile app, self-help kit). In December 2018, semi-directed interviews were conducted with 24 GPs and 24 pharmacists. A diversity of profiles was ensured (professional settings, geographic area, age, gender, smoking status). A content analysis was performed.

Results:

While health professionals had generally poor awareness of the intervention, their opinions were divided depending on their professions. GPs did not feel sufficiently associated nor did they understand how they could specifically participate during this one-month event while they support smokers all year long. Pharmacists were pleased to be involved: they felt recognized in their role as health counselors although their participation remained low. Help cessation services were positively perceived. Some health professionals expected to have a more clearly defined role and to get evidence on the effectiveness of the intervention.

Conclusions:

To improve the acceptability and effectiveness of ''MoisSansTabac'', there is a need to rethink the place of health professionals and how to communicate with them about the campaign.

Key messages:

- 'Mois Sans Tabac' is a social marketing intervention which is considered acceptable by general practitioners and pharmacists but improvements are necessary.
- Health professionals could get more involved in the campaign if their role was better defined.

Free access to nicotine substitutes and e-cigarette for tobacco cessation: STOP a pilot intervention

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Background:

Smoking rates in France are high, and present a substantial socio-economic gradient. Smokers with low socio-economic position (SEP) may be more dependent on nicotine, and have more financial difficulties to buy nicotine substitutes. Tailored approaches are therefore needed.

Methods:

STOP (Sevrage Tabagique à l'aide d'Outils dédiés selon la Préférence) is an ongoing pilot study, examining the acceptability of a smoking cessation intervention. Smokers with low SEP are recruited in six healthcare centres in Greater Paris area by health professionals and are offered substitute(s) of their choice for 4 weeks. Participants can choose between different types of nicotine substitutes (NS; patches, inhalers, etc.) and/or an e-cigarette delivered free of charge. The acceptability of this approach is examined in patients and doctors, using a mixed-method approach.

Results:

So far, 30 smokers have been included in our study, 20% chose e-cigarettes, 36% chose NS, 36% chose both, and 2 participants (8%) chose neither. More than half of participants quit smoking (66%) at one week after inclusion, with 11 reporting tobacco abstinence out of 16 participants followed for 4 weeks. The average number of cigarettes smoked decreased from 15(sd = 10) at inclusion to 8.5 (sd = 5) among those who didn't quit at four week. In qualitative interviews, one of the facilitators highlighted by health professionals was the perceived ''met need'' of smokers with low SEP when given free quitting aids without upfront-payment. One of the reported obstacles is the difficulty in scheduling consecutive follow-up meetings in short time.

Discussion:

It is feasible to implement a smoking cessation programme aimed at smokers with low SEP, and embedded in the healthcare system. If proven effective, this intervention could contribute to decreasing social inequalities with regard to tobacco use. Recruitment in a randomised controlled multicentre trial based on this pilot study will start at the end of 2019.

Key messages:

- It is feasible to put in place a smoking cessation intervention among socially-disadvantaged in healthcare centres.
- Free access to nicotine substitutes and e-cigarettes could be a promising smoking cessation intervention among smokers with low socio-economic position.

Self-Reported Muscle Strength As A Strategy For The Prevention Of Non-Communicable Diseases

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Background:

Muscle strength is considered as a health indicator and an independent predictor of future disease. For this reason, the evaluation of this component in the young population is recognised as a fundamental strategy for the prevention of non-communicable diseases. Field tests are the techniques most commonly used to evaluate muscle strength. However, an alternative method that could be applied in epidemiological studies is self-report questionnaires. The aim of this research was to evaluate the ability of a self-report questionnaire to correctly rank the levels of muscle strength in college students.

Methods:

A cross-sectional study was developed in 135 students from the Areandina University in Bogota, Colombia. For the evaluation of muscle strength, two tests were applied. The first was the application of the handgrip protocol using an adjustable handle Digital Grip Strength Dynamometer. The second was the application of protocols to a maximum repetition in 6 different exercises. For the assessment of self-perceived strength, the third question of the International Scale Fitness Questionnaire (IFIS) was applied. The IFIS response options are presented on a Likert scale with five possible answers: ''very poor'', ''poor'', ''average'', ''good'' or ''very good''. An analysis of variance (ANOVA) was applied to evaluate the ability of the IFIS questionnaire to rank muscle strength levels correctly.

Results:

Overall, 70.3% of the participants were men, and 29.7% were women. The results of the field tests and the self-perception of muscle strength were significantly higher in the male group than in the female group ($P < 0.001$). Students who reported having good or very good muscle strength in the questionnaire had a better result in the field tests compared to those who reported average, poor or very poor muscle strength levels ($P < 0.005$).

Conclusions:

The IFIS questionnaire was able to rank real muscle strength in university students correctly.

Key messages:

- The IFIS questionnaire is a valid alternative to detect students with a potential risk of chronic non-communicable diseases.
- The epidemiology surveillance systems in Colombia should include the application of self-report questionnaires that evaluate potential risk factors.

Effectiveness of Mois sans tabac 2016, a French social marketing campaign against smoking

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Background:

In October 2016, Santé publique France, the National Public Health Agency, launched a social marketing campaign aiming at triggering quit attempts among smokers: ''Mois sans tabac'', inspired by the English 'Stoptober'. This campaign sets smokers the objective of being smokefree for one month, in November. It combines a national mass-media communication with provision of cessation help services (quitline, website, mobile application, self-help kit) and local actions, in connection with the health regional agencies. The study aims at evaluating the effectiveness of this intervention.

Methods:

The effectiveness evaluation is based on a specific analysis of the 2017 Health Barometer, a random survey representative of the population living in metropolitan France conducted between January and July 2017 on a sample of 25,319 individuals aged 18-75 years-old. The participation rate was 48.5%. Multivariate logistic regressions allowed testing the association between recall of the campaign and quit attempts (QA) in the last quarter of 2016, adjusted for sociodemographic confounders ($N = 6{,}341$). Respondents who attempted to quit were contacted at one-year for a follow-up.

Results:

Nearly one in six daily smokers (15.9% [14.9-17.1]) reported making a 24-hour QA in the last quarter of 2016, and 18.4% [15.5-21.3] of them reported that it was related to Mois sans tabac, which represents approximately 380,000 QA [310,000-440,000] related to the operation. Among smokers who made a QA, 31% have been abstinent for at least 30 days [27%-34%] and 18% [15%-21%] reported they did not smoke anymore in 2017. Recall of Mois sans tabac was associated with QA in the last quarter of 2016 ($aOR = 1.3$ [1.1-1.6], $p < 0.01$) and with cessation in 2017 ($aOR = 2.4$ [1.4-4.2], $p < 0.01$), and odds-ratios increased with frequency of exposure and number of sources of information.

Conclusions:

These results show that the first edition of Mois sans tabac was successful in triggering quit attempts among smokers.

Key messages:

- Mass-media campaigns for smoking cessation, combined with provision of help services and local actions, can be effective for triggering quit attempts.
- Importing foreign social marketing programs can be effective.

The association between eating vegetables at start of meal and dental caries among Japanese children

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Background:

Dental caries is still serious problem among Japanese children. Previous studies suggested that higher consumption of vegetables prevent dental caries. Eating order habit, such as eating vegetables at start of meal, called ''Vege-first'', may increase the amount of vegetable consumption, and in turn, prevent dental caries. However, no published studies have examined the impact of ''Vege-first'' habit on dental caries. The aim of this study to investigate the association between ''Vege-first'' and dental caries among Japanese children.

Methods:

We used the 2015 cross-sectional data from the Adachi Child Health Impact of Living Difficulty (A-CHILD) study, a population-based study of all first-grade students in Adachi City, Tokyo, Japan. The number of DMFT (decayed, missed due to decay, and filled teeth) was used as an outcome. Poisson regression analyses were applied to determine the independent association between ‘‘Vege-first’’ habit and the number of DMFT after controlling for the effects from child's sex, parents' marital status, socioeconomic status, and frequency of tooth brushing, drinking sweet beverages, and snacking.

Results:

Of 3,689 valid Japanese children participants, 38.2% had DMFT and 11.6% were having the ‘‘Vege-first’’ habit. The number of DMFT decreased linearly with ‘‘Vege-first’’ habit ($p < 0.001$). After controlled for covariates, the number of DMFT was still significantly and independently decreased with ‘‘Vege-first’’ habit (prevalence $\text{ratio} = 0.89$ (95% confidential interval [0.81-0.98])).

Conclusions:

This study showed that having the ‘‘Vege-first’’ habit was associated with dental caries even accounting for socio-economic status, dental health behavior, and dietary habits. Health policy introducing ‘‘Vege-first’’ habit may be effective to prevent pediatric dental caries.

Key messages:

- Eating habit which vegetables at start of meal called ‘‘Vege-first’’ may increase the amount of vegetable consumption and possibly reduce dental caries.
- The habituation of Vege-first was likely to reduce child's dental caries even accounting for socioeconomic status, dental health behavior and dietary habits.

Barriers and facilitators of health behavior engagement in ultra-Orthodox Jewish women in Israel

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Background:

The ultra-Orthodox Jewish (UOJ) community is a primarily low socio-economic, culturally insular minority sub-sect in Israel. Compared with the general population, UOJ women report higher rates of diabetes and overweight, lower physical activity rates, and have lower breast cancer survival rates. Research in this sub-sect is limited. Identifying the facilitators and barriers to health behavior engagement would facilitate public health intervention design in this population.

Methods:

This study describes UOJ women's barriers and facilitators to engagement in targeted health behaviors (i.e. health nutrition, physical activity), identified through mixed methods analysis. Qualitative and quantitative analyses of interviews ($N = 5$), focus groups (5, including 35 women), and questionnaires ($N = 239$) identified barriers to engaging in preventive health behaviors and intervention preferences.

Results:

Most of the barriers identified (financial and time limitations, personal preferences, lack of education/awareness, and family-related obstacles) are similar to those reported by women from the general population. Cultural aspects such as women's role in the home, religious restrictions, and modesty were also identified as barriers to health behavior engagement, comparable to women from other insular communities.

Conclusions:

Utilizing a mixed methods approach in identifying barriers and facilitators informed intervention development and improved cultural tailoring, potentially serving as a model for intervention design with additional UOJ communities as well as other difficult to access, low socio-economic, culturally insular populations.

Key messages:

- This is the first study identifying facilitators and barriers to UOJ women's health behavior engagement.
- Findings can inform intervention design in difficult to access, culturally insular populations.

Important factors to ensure wellbeing in a whole-school setting – a photovoice study

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Background:

The whole-school approach focuses on promoting health and wellbeing for pupils, employees, and parents. In Norway, several schools are now developing such an approach and opening the school premises for community activities. The aim of this study was to investigate what pupils, employees and parents themselves experience as important factors to ensure wellbeing in a whole-school setting. More knowledge about such factors as perceived by the users could give important information in order to ensure health promotion in other schools wanting to implement a whole-school approach.

Methods:

The participatory method Photovoice was used. Seven pupils, six employees, and four parents at Alvimhaugen Primary School, Norway photographed what they perceived as factors generating wellbeing at the school premises. The school is located in an area with challenges related to living conditions. The pictures were used as basis for six focus group discussions by the participants. All interviews were audiotaped, transcribed and analysed using Malterud's Systematic Text Condensation and Drew & Guillemins framework for image analysis. The results were discussed within the framework of Sense of Coherence (SOC).

Results:

The factors that emerged as important for wellbeing among all stakeholders were interconnected. Important factors were the built and natural environment, activities before/during/after school hours, and organisational characteristics. Further, these factors were associated with a sense of security, belonging, social support and manageability expressed by the stakeholders.

Conclusions:

The factors identified are all known to be central in strengthening SOC. These factors are therefore important for promoting health, not only in pupils but also in employees and parents. The whole-school approach could contribute to address complex public health issues and wellbeing, and might be especially important in schools in deprived areas.

Key messages:

- The built and natural environment, activities before/during/after school hours, and organisational characteristics are all important aspects to ensure wellbeing in a whole-school approach.
- The whole-school approach could contribute to promote wellbeing, and might be especially important in schools in deprived areas.

Implementation process of social prescribing to improve primary care patients' health and well-being

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Social prescribing (SP) is an innovative approach to tackle social determinants of health. It enables general practitioners (GPs) to address non-medical causes of ill-health by linking primary care patients with non-medical community sources of support. Despite convincing results from punctual evaluations, comprehensive evaluation of SP is needed to provide guidance on what works and evidence on its impact.

A SP pilot-project started in 2018 in a primary care service in Lisbon. Its implementation process and outcomes are being evaluated through a longitudinal mixed-method evaluation study assessing patients' wellbeing, quality of life, anxiety and depression in key stages of the intervention and stakeholders' perspectives on facilitators/barriers to the intervention implementation.

GPs refer patients to a social worker of the service, who defines with the patient the individual intervention plan using community resources. Initially, GPs and social workers were trained on SP, a network of community partners was built, SP information was distributed to patients, a referral online platform was created and a baseline study is being conducted. In the 1st semester, 130 patients were referred: 39.2% were ≥65 years old, 70.8% were female, 45.4% had foreign nationality. Over two thirds were referred for multiple reasons mostly social isolation, immigration/social integration, mental health, sedentary lifestyle, access to social benefits and employment/skills training.

The project has enabling to support patients with multiple complex psychosocial needs. Regular meetings between GPs and partners have improving collaboration and patients' supervision. The participatory approach and training emerged as facilitators of the intervention. Yet, the increased burden on social workers due to growing referral profile and some stakeholders' scepticism toward SP need to be addressed. The triangulation of sources, methods and data provide evidence on the intervention impact and scalability.

Key messages:

- The social prescribing intervention has been effective in tackling multiple social determinants of health.
- Intervention evaluation is being key to identify facilitators and opportunities for scale up.

"Health Party" intervention on genetic testing for ethnic minority women: study protocol

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Background:

Culturally appropriate interventions are needed to improve the uptake of genetic counselling and testing among ethnically diverse communities. This study aims to assess the feasibility and preliminary effectiveness of a "Health Party" intervention to increase awareness, knowledge and uptake of genetic testing for breast and ovarian cancer among ethnic minority women in the UK.

Methods:

The "Health Party" intervention will include an educational session in a party setting. Participants will be taught by professionals about genetic testing and how to access genetic testing services in the UK National Health Service. We will recruit a sample of 60 women aged 18 years and over from key ethnic minority groups in the UK (Black African, Black Caribbean, Indian, Pakistani, Bangladeshi) and will conduct four community based sessions, each with about 15 participants. The outcomes will primarily relate to recruitment and attrition rates, data collection, study resources and intervention delivery. A quantitative pre-post evaluation with measurements before, shortly after, and at 6 months following the intervention will be conducted to assess the preliminary effectiveness on awareness, knowledge and uptake of genetic testing. We will use three way mixed analysis of variance (MANOVA) to analyse changes pre- and post- intervention. The fidelity of the intervention including facilitation strategies, quality of delivery and participant response will be assessed.

Conclusions:

Findings will establish the feasibility of the intervention and will provide insights into its effectiveness to increase the awareness, knowledge and uptake of genetic testing for breast and ovarian cancer among women from ethnic minority groups in the UK.

Impact: Depending on its feasibility and effectiveness, the intervention can be used to help women from ethnic minority groups to make informed choices about genetic testing and improve early diagnosis and treatment of breast and ovarian cancer.

Key messages:

- "Health Party" may be a feasible intervention for ethnic minority women in the UK.
- "Health Party" intervention may increase awareness, knowledge and uptake of services.

Lifestyle, environmental exposures and male fertility in healthy young men in North Italy

Claudia Zani

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Background:

Human semen quality is affected by metabolic, lifestyle and environmental factors. We planned a randomized controlled trial to evaluate the effects of lifestyle changes on semen quality in healthy young men living in Italian highly polluted areas. We present here some preliminary baseline data on the association between lifestyle and semen quality.

Methods:

150 non-smokers, non-alcohol drinkers and non-obese young healthy men, aged 18-22 years, have been assigned to an intervention or control group according to a 1:1 randomization plan. The intervention group follows a 4-month nutritional pathway based on a Mediterranean dietary pattern and receives suggestions on practice of physical activity. All subjects undergo urologic examination, measurement of weight, height and abdominal circumference, an interview on lifestyle variables, and provide blood and semen samples in fasting conditions, at the enrollment and at the end of the intervention and follow-up (after 8 months). Adherence to Mediterranean diet is assessed using the "PREvención con DIeta MEDiterránea" (PREDIMED) tool, and physical activity using the "International Physical Activity Questionnaire" (IPAQ). Automated sperm analysis for all semen parameters is performed on the SQA-V GOLD.

Results:

The data of 101 subjects living in a highly industrialized area in North Italy (mean±SD: age: 20.3±1.2 years, BMI: 22.3±2.2) were analyzed. The sperm cell concentration was higher in subjects with IPAQ score > median than those with lower values (68.3±48.6 vs 63.7±47.0 106/mL). Total percent motility was higher in subjects with abdominal circumference < median (50.7±13.6 vs 41.2±18.8, p = 0.004), in subjects with IPAQ score > median (48.2±16.8 vs 44.2±16.8), and in subjects with PREDIMED score > 7 (47.6±18.8 vs 45.0±15.0).

Conclusions:

These preliminary data suggest that semen quality is associated with abdominal fat and physical activity in healthy young men.

Key messages:

- The semen quality is a sensitive marker of the health status and is predictive of disease occurrence.
- Our study suggests that semen quality is associated with lifestyle aspects in healthy young men.

Developing the Turkish version of the exercise benefits/barriers for the elderly scale

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Objective:

The aim of this study was develop the Turkish version of the exercise benefits and barriers scale for elderly people.

Methods:

The study was carried out with the methodological research design with a total of N = 300 individuals living in a nursing home (n = 134) and applying to the Family Health Center (n = 131) between October 2017 and May 2018. The study included subjects aged 65 years and older who had no dementia, communication or physical disability. The item pool of the scale consisted of 36 items. Items were structured in five-likert form. Expert opinions of eleven individuals were received for Content Validity Index (CVI). The data of the study were collected with 26-question socio-demographic characteristics form, the Mini Mental Test and the Exercise Benefits/Barriers Scale for the Elderly (EBBSE). Approval and consents were obtained from the relevant Ethics Committee, from the healthcare facility and participants. For the validity and reliability; CVI, exploratory factor analysis (EFA), confirmatory factor analysis (CFA) Hotelling's T2, paired sample t test have been carried out.

Results:

The mean age of the subjects was 72.44±5.94 years. Scale's CVI was 90. The factor analysis demonstrated that the scale included three sub-dimensions of 18 items in Physical and Psychological Benefits of Exercise, 2 items in Social Benefits of Exercise and 8 items inExercise Barriers accounting for 55.36 % of the total variance of the scale. Cronbach Alpha internal consistency coefficients of the scale was .84. All of the four fit indices obtained in the CFA had desirable magnitudes (RMR = .05;RMSEA = ,07;NFI = .81;CFI = .87), indicating a good fit between the model and the data. The item total score correlations ranged from .40 to .69. The scale's test-retest correlation was .99.

Conclusions:

EBBSE is a valid and reliable scale that can be used to evaluate benefits and barriers perceptions in physical activity practices.

Key messages:

- Developed EBBSE can be used to determine the perceptions of exercise for elderly.
- Developed EBBSE can be used to change barrier perceptions of exercise.

Effectiveness of the universal substance use prevention program on alcohol consumption among adults

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Background:

Universal substance use prevention program (PUNAV) is a 24-hour course primarily aimed at developing the competencies of future teachers and prevention trainers. One of the key strategies in the PUNAV is correcting the misperceptions and this way changing normative beliefs about risky behaviour, which, when overestimated, are a predictor of risky behaviour.

Objective:

To explore whether the participation in PUNAV has an effect on alcohol use of future teachers and whether this relationship is mediated by descriptive normative belief regarding alcohol use while considering gender as a possible moderator of these processes.

Methods:

The sample consisted of university students from Slovakia; n = 277, 78% women, Mage = 22.23, SD = 2.12. The PUNAV effect was explored within an experimental design. The potential pre-test effect was rejected based on a comparison within the experimental groups and within the control groups (using Solomon model of four groups). The bootstrapping analysis was used to test for moderated mediation according to gender using SPSS Process macro and linear regressions.

Results:

The results showed that participation in the PUNAV has a direct effect on alcohol consumption (AUDIT subscore) only among men (b = -1.88, 95%CI -2.9- -.8). An indirect effect through the descriptive normative beliefs about alcohol use (effect size: -.25, BootCI: -.46 - -.07) was found when the whole sample was taken into account. Participation in PUNAV was found to be related to normative beliefs about alcohol use ($\beta = -.32$, p<.001) and these were related to alcohol consumption ($\beta = .20$, p<.001).

Conclusions:

Participation in the PUNAV, which aims primarily to develop the competencies of future teachers proved useful for prevention showing a significant effect with respect to their alcohol consumption.

Acknowledgement: This work was supported by grant projects APVV-0253-11 and APVV-15-0662.

Key messages:

- Well-designed and databased prevention programs can affect risk behaviour among adult population.
- The importance of normative beliefs as a major strategy to achieve effectiveness of prevention programs has been constantly supported by empirical evidence.

Obesity Prevalence in Alabama: Trends from 2011 to 2017 and Evaluation of a State Obesity Program

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Background:

Alabama, one of the southeastern states in the US, suffers from a heavy burden of obesity. In 2014, Alabama launched a state program named 'ALProHealth', aiming to prevent and reduce obesity prevalence. The objective of this study is to evaluate the potential impact of the ALProHealth Program on the prevalence of obesity in Alabama from 2014 to 2017.

Methods:

Data for this study come from the Behavioral Risk Factor Surveillance System (BRFSS). An interrupted time series design was employed. The state obesity prevalence trend for the pre-program period (2011-2014) was estimated and compared with the post-program period (2015-2017). Statistical analyses were conducted using segmented linear regression. Indiana was chosen as the control group in this study.

Results:

The obesity prevalence in Alabama significantly increased from 31.8% in 2011 to 36.2% in 2017, increasing by 0.81% on average each year (95% CI: 0.47 to 1.15, p = 0.002). Before the ALProHealth Program, the obesity prevalence increased by 0.59% (p = 0.11) and 0.32% (p = 0.34) in both Alabama and Indiana respectively, though it is not statistically significant. After the program implementation, the slope of obesity prevalence increased by 0.43 (p = 0.45) and 0.03 (p = 0.96) in Alabama and Indiana respectively, though change is not significant. When comparing Alabama and Indiana, the rate of slope change is higher in Alabama (0.73) compared with Indiana (0.093), indicating the rate of slope change in obesity prevalence increased faster in Alabama than Indiana.

Conclusions:

To sum up, the study found no evidence that the ALProHealth Program contributed to the decrease of obesity prevalence in Alabama. One possible reason is that there was low program coverage. Future studies should examine the potential effectiveness of other programs using a similar conceptual model as ALProHealth Program.

Key messages:

- In 2014, Alabama launched a state program named 'ALProHealth', aiming to prevent and reduce obesity prevalence.
- The study found no evidence that the ALProHealth Program contributed to the statewide decrease of obesity prevalence in Alabama, which may attribute to low program coverage.

The relationship between participation to social activities, life satisfaction, isolation on aged

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Objective:

This study was conducted to determine the relationship between the participation of people living in the nursing homes to social activities and their life satisfaction, social isolation and loneliness.

Methods:

The study was performed between January 2017 and April 2018 in three nursing homes using the cross-sectional research design. The study population consisted of 310 elderly people in total, 118 women, 192 men, who were over 65 years of age and had no mental and communication problems. Ninety percent of the population was reached. The data were collected by using a questionnaire, Standardized Mini Mental Test, Satisfaction with Life Scale (SWLS), Social Isolation Scale (SIS) and Loneliness Scale for Elderly People (LSEP). Descriptive statistics, Mann-Whitney U test, Kruskal-Wallis variance analysis and Spearman correlation analysis were used in data analysis.

Results:

The mean age of the elderly subjects was 74.10 ± 7.57 years, and 61.9% were male and 38.1% were female. Elderly subjects' SWLS and LSEP scores were below the median, and their SIS score was above the median value. Elderly people without disabilities, who can meet their own needs, do not feel alone, stay in the healthcare facility of their own accord, are satisfied with the services healthcare facility and with life, do sports, go to cinema and theater in their free time and go out more often had high SWLS median values and low SIS and LSEP values (p < 0,05). Examining scale correlations, a moderate and negative correlation between SWLS and SIS (r = -,59; p = ,000) a highly significant and negative correlation between SWLS and LSEP (r = -,70; p = ,000) and a positive, statistically moderately significant correlation between SIS and LSEP (r = , 65; p = , 00) were found.

Conclusions:

Life satisfaction increases and social isolation and loneliness decreases when elderly people living in nursing homes participate in social activities.

Key messages:

- Loneliness of elderly individuals can be reduced by increasing participation in social activities.
- Social isolation of elderly individuals can be reduced by increasing participation in social activities.

Opticourses: promoting healthier food purchases at no additional cost in low-income households

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Introduction:

Healthy diets are generally more expensive than unhealthy diets, explaining why socially disadvantaged individuals perceive food prices as a barrier to improve their diets. It is thus crucial to develop strategies enabling the achievement of good nutritional quality with a low budget, taking into account actual beliefs and expectations of the target population. A co-construction approach is thus recommended, involving participants at each step of the intervention to maximize its impact.

Methods:

The ''Opticourses'' program was launched in 2010 with a feasibility study, followed by an intervention research in 2012-2014, in order to develop and evaluate a prevention program aiming at improving the nutritional quality of food purchases at no additional cost in a socioeconomically disadvantaged population. In order to implement activities tailored to the target population, participants were involved in the development of the protocol and the tools of the intervention and evaluation processes.

Results:

Opticourses's workshops (8 to 12 participants) include different activities displayed in four 2h sessions around real food purchases of participants, and games and exchanges aimed at promoting food and food choices of good nutritional quality for their price. The intervention research showed improvements in food purchasing behaviors of Opticourses participants. A transferability phase was conducted in 2015-2017. Since 2017, Opticourses is spreading in several regions of France, through training of professionals, in particular the courses organized by the Health Education Regional Committee (CRES) in the South of France.

Discussion:

Bringing an original, concrete, co-constructed and scientifically based response to an everyday life problem is the main strength of the program. One important risk of failure for such prevention program is the underestimation of the requirements of the intervention research, in terms of time and human and budgetary resources.

Key messages:

- From a research point of view, getting access to new food purchasing data will allow a continuous refinement and innovation in the improvement of the diet for people with budgetary constraints.
- By focusing on food purchasing, a familiar activity that most adults feel able to handle, the Opticourses program is engaging and pragmatic, in accordance with health promotion principles.

Transition to health democracy in France: occupational therapy for population-based interventions

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Background:

Health promotion stands as a core value of occupational therapy, a client-centred healthcare profession that achieves this goal by enhancing individuals' ability to engage in activities that they want to, need to, or are expected to do. Yet, occupational therapists in France have not been working in alliance with Public Health funding or programs in the community to reduce possible illnesses leading to chronic conditions and hospitalizations. There is a need to discuss how these professionals can collaborate with Public Health initiatives to move beyond individual interventions and address population-based needs. This study explores occupational therapists opportunities to develop health promotion practices in France.

Methods:

A participatory action research was conducted with six co-participants using occupational justice-based frameworks and the French National Public Health report on Health Promotion as a ground for discussion which extended over 3 months. Qualitative content analysis and Kemmis' practice architecture theory was used to understand how practices are shaped by discursive, economic and socio-political circumstances.

Results:

Preliminary results show that occupational justice-based reasoning enables practitioners to shift from an individual to a population needs focus. Yet, the lack of education for this type of practices is evident. The findings highlight prerequisites that need to be fulfilled in order to apply an occupational justice-based approach within health promotion initiatives.

Conclusions:

Working on community settings allows practitioners to comprehend the complex interactions between individuals and context. Public Health field provides an interface between society requirements and populations needs in which occupational therapist could enact health promoting interventions. The practice in this field is emerging and therefore it is relevant to discuss the competencies that should be included within occupational therapy education.

Key messages:

- A healthcare system that does not consider its population's contextual situation is a failing system. France's welfare transformation requires all professionals to develop community-based initiatives.
- The findings will support the development of the first guidelines for health promotion occupational therapy practices in France.

Schoolchildren's participation in health promotion process

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Background:

Health promotion (HP) process enables people to increase control over their own health. Schools offers ideal setting for HP interventions as most children spend a large part of time there. The pupils should be involved in this process. Information about schoolchildren's participation in HP process is a key when planning measures to improve the situation. The shortage of information about students' participation in this process leads to the aim of study - to determine schoolchildren's' participation in HP process.

Methods:

Cross-sectional study was conducted in 2018. 906 schoolchildren aged 14-19 from 29 schools in Lithuania were surveyed by anonymous questionnaire (response rate 80.5%). Logistic regression models with 95% of CI were used for the data analysis. Statistical significance level was $p \leq 0.05$.

Results:

More than half of respondents (51.4% (95% CI: 48.2; 54.7)) participated in HP process. Participation was significantly related to residence (OR = 2.47 (95% CI: 1.80; 3.39)) and grade (OR = 1.39 (95% CI: 1.06; 1.82)). Participation in health promoting events (57.7% (95% CI: 53.2; 62.1)), assistance in organizing events (33.5% (95% CI: 29.3; 37.9)) - were the most common ways of schoolchildren's participation. 35.3% of pupils (95% CI: 32.3; 38.5) evaluated their participation as good or very good. 68.7% of schoolchildren (95% CI: 65.6; 71.6)) wanted to participate in HP process more actively. Girls were more likely to want to participate in HP process more actively than boys (OR = 2.08 (95% CI: 1.56; 2.78)), children who lived in countryside were more likely to want to participate in HP process more actively than pupils who lived in city (OR = 1.42 (95% CI: 1.02; 1.99)).

Conclusions:

Only half of schoolchildren participated in HP process. The majority of pupils would like to participate in HP process more actively, so it is very important for the school to create the right conditions and encourage schoolchildren to participate in HP process.

Key messages:

- The participation of schoolchildren in health promotion process is insufficient.
- The majority of pupils would like to know more about health promotion process.

Is medical ionizing radiation negligible or neglected? How to interact with patients?

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Issue:

Medical exposure is in France, the first source of artificial exposure of populations to ionizing radiation (IR). The use of ionizing radiation in diagnosis, (CT scan) is steadily increasing. With IR, nothing is visible, nothing is lost, everything is cumulative and transformed. How to explain it to patients and how to answer their questions? How, in this area, can patients become empowered?

The radiologists have already produced information materials for patients. Explaining the different types of exams is easy, explaining the dose is more complex; doses are not expressed with the same units. In addition, since the organs do not all have the same sensitivity to ionizing radiation, the addition of doses delivered does not always make sense. The comparison of doses delivered with the natural exposure to ionizing radiation makes it understandable. Specific awareness campaigns such as 'for lumbago radio, this is not always the right scenario' were launched.

One of the main rule of radioprotection is the justification of the act in relation to the expected benefit. Both general practitioners and patients can influence the decision by asking simple questions. An awareness campaign on this theme is planned by HERCA (European HEad of Radiation protection Competent Authorities) in Europe in November 2019.

It aims to reduce inappropriate exams by breaking habits. It is aimed mainly to general practitioners.

Results:

The French Nuclear Safety Authority will decline this campaign for both general practitioners and patients. This campaign is based on the most common questions such as:

- If I have already made a diagnosis, what is the added value of a radiological examination?
- Why should I have another radiological examination?
- Why refer my patient for an X-ray or CT if another examination can be done that does not use ionizing radiation?
- Why is it important to ask if pregnancy is a possibility?

Lessons:

Illustrative documents will be presented at the congress

Key messages:

- Risks related to medical exposure to ionizing radiation are not sufficiently explained.
- A European campaign of recognized authorities and the involvement of patients should help reinforce the messages of the French campaign.

Analysing local public health action plans: development of a tool for the French CLoterreS Study

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Background:

The potential contribution of local authorities to prevention and health promotion is well recognized. In France, since 2009, Local Health Contracts (LHCs) are mobilising Regional Health Agencies, local elected officials and stakeholders to intervene in 4 areas: health promotion, prevention, health care and social care. LHCs remain poorly documented policy instruments.

Methods:

As part of the CLoterreS study, a multidimensional coding tool was developed and tested by two coders to explore the place of prevention and health promotion in LHCs. Its development was based on the WHO conceptual framework for action on the social determinants of health and the Self-assessment tool for the evaluation of essential public health operations in the WHO European Region. Preliminary results concern a random sample of 17 LHCs from as many French regions selected among the 165 LHCs signed between 2015 and March 2018.

Results:

On average, the LHCs featured 26 action forms (AF) (min: 5; max: 56). In a LHC, the average proportion of AF addressing either the social determinants of health, living circumstances or other determinants targeted by health protection, promotion or primary prevention interventions (SDoH-HPP-P1) was 79% while 44% of the AF address secondary/tertiary prevention, social care or the organization of health care and services. Among the SDoH-HPP-P1 themes (double coding permitted): psychosocial life circumstances were addressed in the 17 LHCs and concerned, on average, 31% of their AF; material living circumstances were addressed to a lesser extent (16 LHCs, 13%); other key themes include environmental health (12, 14%), mental health (16, 12%), alcohol abuse (15, 11%), drug use (14, 11%), smoking (13, 9%), physical activity (13, 12%), healthy eating (12, 12%).

Conclusions:

This work confirms that LHCs are instruments with prevention and health promotion at their core. Explanation of the differing investments in this area across our sample will be further explored.

Key messages:

- Local Health Contracts are promising instruments to address locally a broad range of health determinants.
- The CLoterreS analytical tool has proven effective in capturing multiple themes and shedding light on differences between Local Health Contracts' action plans.

Facebook Intervention To Improve Physical Activity Level Among Youth

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Background:

Physical activity level decreases during the transition from late adolescence to young adulthood. Social media are nowadays widely used and part of many people's daily routines and the interventions on these websites have the possibilities to be integrated into those routines without becoming a burden. The aim of this study was to assess physical activity level among medical students and to assess the possibilities of using social media intervention with an aim to improve physical activity among them.

Methods:

Prospective study was conducted during October of 2016 at the Faculty of Medicine, University of Belgrade, Serbia. The study included 375 first and fifth-year students. At the baseline, students filled in the questionnaire regarding social and lifestyle characteristics as well as their physical activity. Physical activity was assessed using the International Physical Activity Questionnaire (IPAQ). After completing the questionnaire, students were asked to join a Facebook discussion group. The intervention consisted of motivation for physical activity through motivational pictures, texts, and discussions. The second assessment was done after one month. Based on the reported physical activity level students were divided into two groups: sufficient (>600MET-minutes/week) and insufficient physical activity ($\leq$600 MET-minutes/week).

Results:

Total of 85.4% of students were sufficiently active at the baseline, while 90.4% were sufficiently active after one month. Multivariate logistic regression analysis showed that students who were part of the Facebook group (OR: 3.51, 95% CI: 1.46-8.43) and students who had sufficient physical activity at the baseline (OR: 5.44, 95% CI: 2.44-12.13) had a higher likelihood to be sufficiently active after one month.

Conclusions:

Social media can be used for interventions targeting lifestyle change among young adults and activities on these websites can be adjusted to meet the needs of the target population.

Key messages:

- Intervention on social media could lead to lifestyle change.
- Interventions on social media could be adjusted to fit the target population.

Children self-reports and Parent proxy reports of physical activity and sedentary behaviour

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Background:

Aim of this study was to determine agreement between parent proxy reports and children self-reports of physical activities and sedentary behaviour.

Methods:

The sample included 7-10 year-old children and their parents (n = 188) in a local community in Northern Serbia. Data were collected by questionnaires designed to assess context-specific measures of children's physical activity (outside play, organized sports) and sedentary behavior (TV viewing, using computer, playing electronic games). Children and their parents completed questionnaires separately. Agreement between children's and parent̀s responses was calculated with Cohen's kappa. Differences in parent̀s and childreǹs responses in relation to gender, grade and BMI were analyzed using $\chi 2$ test. Values $p < 0.05$ were considered statistically significant.

Results:

Level of agreement between parents' and children's reports ranged from poor for variable TV viewing before going to school ($\kappa = 0.21$; p = 0.04) to substantial for variable physical activity before going to school ($\kappa = 0.74$; p = 0.00). Girls were more likely than boys to agree with parents about time spent playing on the computer after school ($\chi 2 = 11.23$;p = 0.01). Overweight and obese children tended to report more time in TV viewing than their parents ($\chi 2 = 26.4$;p = 0.01).

Conclusions:

There are differences in reports of physical activities and sedentary behaviour between 7 to 10 year-old children and their parents The lowest level of agreement found for variable TV viewing indicates low awareness and control of this screen-based sedentary behaviour.

Key messages:

- Differences in parents' and children's reports of children's physical activities and sedentary behaviour are confirmed.
- It should be taken into consideration in studies which use self-reports or proxy reports for assessing children's physical activities and sedentary behaviour.

Factors promoting health empowerment of young people: a qualitative pre-interventional study

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Background:

Angata, an intervention research project led by the regional instance of health education and promotion (Ireps) of Burgundy-Franche-Comté, aims to strengthening the autonomy and decision-making ability of vulnerable youth regarding their health. It is implemented in several facilities. The goal is to improve well-being and quality of life of young people benefiting from socio-educational measures by working with them and the professionals in their living environments. The objective of the study presented was to analyze the factors promoting health empowerment of young people, prior to this intervention, in the Employment Integration Facility (Epide) of Belfort.

Methods:

Interviews were conducted with 8 young people and 13 professionals to explore their representations regarding well-being, nutritional health (eating habits, nutrition, physical activity), self-esteem and physical appearance. The determinants of health, lifestyles and organization in the living environment as well as the biographical pathways of young people were also collected.

Results:

The Epide, structured on a military model, welcomes young people out-of-school, without qualifications and with complex life courses. The Epide can be seen as a functional community whose whole effort is dedicated to the goal of young volunteers leaving for a job or professional training. The support provided by educators (professional social or former military) is focused on building skills and restoration of self-esteem. Critical consciousness develops over time spent within the structure. The factors promoting empowerment within this strict framework are numerous, but young people's participation in the decisions taken within the structure remains at the solicitation stage.

Conclusions:

The framework provided at the Epide allows an environment conducive to the process of individual empowerment. These leverage can be mobilized to reinforce health empowerment of youth during the Angata project.

Key messages:

- An empowering educational environment, even strict, can foster the health empowerment of young people subject to vulnerabilities.
- The allowed level of participation remains an important factor to consider in order to fully promote health empowerment of young people.

Physical Activity Patterns of Primary School Teachers in a District in Istanbul, Turkey

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Background:

Physical inactivity (PI) is determined as the fourth leading risk factor for global mortality. Insufficient physical activity is prevalent in Turkey; approximately 4 in 10 adults are physically inactive and have less than 150 minutes of moderate activity per week. The objective of this study was to assess the prevalence of PI and the factors associated with it among primary school teachers in a district in Istanbul, Turkey.

Methods:

This was a cross-sectional study conducted in a district in Istanbul, Turkey. Sample size was calculated as 434 assuming a PI prevalence of 70% with a 95% confidence level, margin of error of 0.05 and a design effect of 2. Twenty out of 39 schools were selected randomly. PI was assessed through using International Physical Activity Questionnaire short form. Logistic regression analysis was used to determine the variables associated with PI.

Results:

A total of 345 teachers participated in the study (response rate: 79.5%). Among the participants the mean age was 45.6± 8.3 and %74.1 were women. PI prevalence was 49.2% (95%CI: 43.6%-54.7%). PI was significantly associated with having chronic disease (OR: 1.8, 95%CI:1.0-3.0), having children (OR: 2.9, 95%CI:1.5-5.7), using motor vehicles for transportation (OR:4.1, 95%CI:1.5-11.0) and using elevators (OR:4.4, 95%CI:1.7-11.4). Among women, PI was significantly associated with having children (OR: 10.3, %95CI:1.2-87.1) and using elevators (OR: 8.4, 95%CI: 2.3-30.8).

Conclusions:

Approximately half of the teachers were physically inactive. As having children is an important determinant of PI, we need to adopt appropriate conditions so that parents, particularly women can engage in physical activity together with their children. Active transportation and use of elevators should be encouraged. Special attention should be paid to adults having chronic diseases.

Key messages:

- PI is highly prevalent among school teachers, particularly among the ones who have chronic diseases.
- Strategies supporting parents especially women to engage in physical activity together with their children, encouraging active transportation and use of elevators should be implemented.

Appropriate approaches for improving health promotion literacy in adolescents – a systematic review

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Background:

Adolescents are exposed to various risks for their health: substance use, Internet overuse, video game addiction, unhealthy diet (reduced intake of fruits and vegetables, fast food culture), low physical activity, overweight, stress, violence, unsafe sexual behaviours, self-medication. Health literacy is defined as the knowledge, motivation and competence to access, understand, appraise and apply right information to make decisions in terms of healthcare, disease prevention and health promotion. Despite the advancement of theoretical models, many national and international health promotion programs, the percentage of unhealthy behaviours still persist in young age. Objective: Current review proposes to assess the implementation and effectiveness of various interventions in order to identify possible success or failure factors.

Methods:

Comprehensive Systematic review was performed. After three steps data searching (in PubMed, SCOPUS, Cochrane, PsycINFO, Google Scholar) and critical appraisal, 63 studies out of 739 were fully retrieved.

Results:

Implementation aspects as intervention types (single or combined targeted risk factors), type of audience (students, parents, school staff, communities), settings (home, school or outdoor), type of organization (face to face, groups, online), professional or peer-led, communication type (written materials as brochures, posters or videoconferencing) or effectiveness measures were extracted and synthesized. Important features of context such as funding, European or government programs were used for clustering the studies.

Conclusions:

Health literacy interventions in adolescents need the involvement of education staff and parents participation. Health literacy for adolescents has to take into account cultural context, language, psychological features of each age; either digital or non-digital interventions cannot elude face to face communication between adolescents and their parents, academics or peers.

Key messages:

- Health literacy school-based interventions are effective but the content for adolescents audience should rely on guidelines provided by interdisciplinary teams of experts.
- Health Literacy interventions in adolescents should be age-appropriate and do-not-harm precautions must always be taken in order to avoid prejudices, body-image or self-esteem concerns.

Improving participation of hard-to-reach older people in diet interventions: the INVITE strategy

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Background:

A lot of behavioural interventions promoting healthy eating and physical activity are focusing older people, but, among them, individuals from low socioeconomic status and/or experiencing social isolation participate less. The aim of the present study was to design, pilot and perform a formative evaluation of an active recruitment strategy called 'INVITE'. This strategy aimed to improve participation of hard-to-reach older people in existing collective workshops combining diet and physical activities dedicated to older people.

Methods:

We co-constructed this strategy, based on results from a literature review, qualitative interviews with older people and professionals using the Behaviour Change Wheel framework as a guide. INVITE includes 5 steps: i) identification of socially deprived/isolated people aged 60-85 years in retirement fund databases; ii) postal invitation letter; iii) phone call; iv) home visit by a social worker. The formative evaluation used questionnaires (closed and open-ended questions) completed by 2 social workers in April 2019.

Results:

Among the 54 older people selected in the databases, 29 could be reached by phone. Among these 29 persons, 25 reported being interested by the collective workshops; 17 refused the home visit (main reasons: not available during the workshops period, current health problems); 12 accepted the home visit, but only 10 could be visited at home (one was ill; one cancelled the visit). Nine out of these 10 persons accepted to participate to the workshops. The main motivating factors were that workshops were: free; perceived as friendly; and as an opportunity to "go out" and to receive diet counselling to improve diet quality with no additional cost.

Conclusions:

The INVITE strategy was perceived positively but adjustments are needed to improve home visits acceptation rate (e.g., by revising the criteria used to identify people in the databases). We will now evaluate the attendance rate to the collective workshop.

Key messages:

- The INVITE strategy was designed to improve participation of hard-to-reach older people in combined diet and physical activity collective workshops.
- This strategy was perceived positively by most older people contacted and both social workers.

Measuring health promotion in a sports club setting: a modified Delphi study

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Background:

The settings-based approach has become an increasing focus in health promotion since the World Health Organization's 1986 Ottawa Charter. Schools and cities have implemented this approach, but development within sports clubs is limited. Thus, an internationally validated measurement of health promotion within this setting is lacking.

Methods:

A modified Delphi study was completed to develop an international evaluation tool grounded in the settings-based approach. Expert panelists from academia, sports and health sectors were invited to participate in 3 online rounds. Items were generated or selected based on 3 prior Delphi-based studies and 2 nationally validated scales. Round one created a collaborative list of items, round two validated items based on relevance, importance and feasibility and the final round classified items into one of four determinants: cultural, social, environmental or economic.

Results:

Panelists (69) from 13 countries participated in creating a final list of 62 items at 3 organizational levels. The sports club level included; 5 cultural, 6 social, 6 environmental and 5 economic items. The management level included; 5 cultural, 5 social, 5 environmental and 3 economic items. The coaching level included; 5 cultural, 5 social, 4 environmental and 4 economic items.

Conclusions:

This study provides three important innovations; 1- it is rooted in theory through the settings-based approach, 2- the measurement tool includes three levels within sports clubs, capturing a whole club dynamic and 3- all items included in the tool have been validated by an international panel of experts.

Key messages:

- This 62-item measurement tool allows the comparison of perceptions from participants, coaches and management regarding how health is promoted within their sports club.
- This information offers insight on the capacity of sports clubs to implement and monitor policies and practices on

- the promotion of health beyond sports performance within their organization.

Improving health outcomes in Northamptonshire's Homeless population

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Issue:

Homeless people experience inequalities and barriers to accessing healthcare. Northamptonshire had significantly higher number of homeless compared to the England average. This pilot aimed to provide health screening and interventions for Northampton's homeless population using an integrated system wide approach. This would inform commissioning and contribute to the database.

Description:

The project used a collaborative resource pooling approach by 24 NHS and non-NHS partners. Planning was reliant on information from voluntary sector so budgets were estimated. Health outreach clinics were planned over 3 months and delivered over 3 weeks at 10 voluntary centres offering blood borne viruses (BBV) and latent tuberculosis screening; basic health checks; and Hepatitis B and seasonal flu vaccinations. Unregistered people were supported to register with a GP. Evaluation will determine how to better collect data and promote and offer such a service.

Results:

127 people received basic health checks; 27 were overweight and 20 had high blood pressure. Of the 102 tested for BBVs, 5 were Hep C +ive and 2 were Hep B +ive. A fifth of those tested for LTBI were positive. In total, 67 Hepatitis B and 12 seasonal-flu vaccinations were given. 12 people required GP registrations. Primary and secondary care referrals were made. Following the pilot, services will provide wrap around care for Northamptonshire's homeless. Clinics at various times and locations will enable homeless people to engage with health and social services.

Lessons:

- Difficult to stratify the homeless and identify needs
- This innovative project was used as a case study by other areas
- Published data underestimates numbers of homeless
- Allow Adequate preparation for such events
- Consider health and safety risk assessment of venues during planning
- Staff continuity ensures consistent team working
- Dedicated communications lead support required

Key messages:

- Wraparound health promoting services are required to enable this cohort of population to engage with and seek health and social care.
- A multisectoral approach is required to improve and address inequalities of vulnerable groups.

The profile of people living in extreme poverty in the region of Crete

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Background:

The financial crisis of the last decade has increased the number of people living in extreme poverty in Greece. Until today, there is no research evidence on the bio-psycho-social needs of the population. The current study, among other, aimed at investigating the living and working conditions, the health and mental health status of these people and produced recommendations for health care policy and planning.

Methods:

A cross-sectional study was carried out in Crete Region with adult beneficiaries of material support benefits (according to income-related criteria). The study was part of the program FAED, which was co-funded by the EU and offered material support (e.g. food, material for personal hygiene, etc. to more than 17.000 beneficiaries in Crete region within 2016-2017. A structured questionnaire extracted information on various aspects including, working, housing and living conditions, health and mental health status.

Results:

798 individuals (46.5% male; 43.3 years) consented to participate and completed the questionnaire. Mean time of unemployment was 4.2 years. 26.8% was accommodated by relatives, 23.5% rented a house and 18% lacked heating. Nearly half of the participants reported a chronic disease (47.0%), 24.1% reported disability certified by health authorities. 4.9% had severe alcohol-related problems, 50.6% had mild to severe depression symptoms and 40.3% mild to severe symptoms of anxiety disorder. 12.0% totally lacked a support network for daily practical and emotional issues.

Conclusions:

Personal psychosocial needs seem to have been neglected because of complex family needs. Socioeconomic deprivation seems to have exacerbated chronic disease management due to neglect of health care needs. A huge burden of mental diseases is evident necessitating community mental health care.

Key messages:

- Mapping of bio-psychosocial needs is important for social policy and health care planning.
- Integrated care is necessary to meet the complex needs of people living in extreme poverty.

Romanian students' attitude and opinion about the smoke-free indoors law

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The Romanian Parliament approved the first piece of legislation regarding smoking in public places in 2002; smoking was banned in most indoors but allowed in bars and restaurants. The law has been amended several times; the 2016 amendment banned smoking in nearly all indoor public spaces, in indoor workplaces, in playgrounds and on public transport; there are only two exceptions to the law - cells in maximum security prisons and designated rooms in the transit areas of international airports.

In this context, we asked 498 students (in Law, Business Administration, Electronics, Languages, Sciences, Medicine, Dentistry, Pharmacy or Nursing), aged 21.93 ± 4.21 years, males and females, to answer a 23-item questionnaire on cigarettes smoking; the questionnaire included seven questions related to the Romanian smoke-free indoors law.

A number of 131 students (26.3%) are cigarettes-smokers; there are statistically significant differences among the faculties subgroups ($p < 0.01$), the highest percent of smokers being in Dentistry (50%) and the lowest - in Languages (13%). Most of the students (N = 466 - 93.6%) agree with the smoke-free indoors law; the disagreement is registered among the smokers (27 vs. 5 non-smokers, $p < 0.001$). A number of 360 subjects (72.29%) mention they met situations of smoking in public places: in bars/clubs/restaurants (73.3%), staircases of blocks of flats (56.1%), public transport or taxis (44.1%), even hospitals (8.3%) and classrooms (7.7%). In 75.8% out of these situations nobody took attitude; 40 students (11.1%) acted themselves and drew attention (most often successfully) to the smokers about breaking the law. One fifth of the smokers of the group have also smoked/intended to smoke in public places; most of them are students in Electronics and just one - in Law ($p < 0.05$).

Romanian students seem to be content with the ban of indoor smoking. Actions to reduce consumption of tobacco products and to protect public health have to be continued.

Key messages:

- Romanian young people seem to be content with the decrease of second hand smoke in indoor public spaces.
- Intense actions to combat the tobacco epidemic are still needed in Romania.

Sleep problems among Dutch higher educational students, working towards solutions

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Background:

Lately, attention for the role of sleep in health and wellbeing has increased. Short sleep duration and poor quality of sleep are associated with a higher chance at several (mental) health issues, including a higher mortality risk. Furthermore it is associated with attention problems and lower academic achievement. Poor sleep has a high prevalence, especially among students. We aim to provide (policy) recommendations from studying the associated factors on an individual and social level with poor sleep and its consequences.

Methods:

In a cross-sectional survey design (N = 493), the extent of sleep problems and its associated factors was studied amongst a group of Dutch students. The Pittsburg Sleep Quality Index (PSQI) was used. Linear regression analysis was performed. Participants were recruited through social media and e-mail (Male 43%; Female 57%; mean age, 22 years).

Additionally, experts were questioned in a small survey to come up with solutions (N = 24).

Results:

59% of higher educational students suffer from poor sleep quality. Factors that were significantly associated with worse sleep quality were: sleep need, behavior and psychology (effects stress overload), having a paid job in the evening/night, loneliness, having the Chinese and other ethnicity and having a sleep-related disorder. Sleep was significantly associated with worse mental health, vitality and drug use. Additionally, sleep was a significant predictor for attention problems and worse academic performance in the current academic year.

Conclusions:

Nearly 2 out of 3 students suffered from poor sleep quality, reconfirming the high prevalence amongst higher educational students in other studies. Universities can contribute to better sleep quality of their students by educating their students more about sleep hygiene (including effects of drugs and how to deal with high work pressures), and make them more aware of the availability of student psychologists and student general practitioners.

Key messages:

- Students in higher education are a population at high risk for poor sleep quality.
- More attention for the importance of sleep for health, wellbeing and academic achievements should be implemented in the university institutional context.

Using retrospective process analysis to identify lessons learned from a community health initiative

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As the WHO-Health-in-all-Policies-concept suggests many of the health-related aspects of the social, physical and economic environments can be modified within the community setting. In reality, developing and implementing population-based health initiatives is often challenging for both communities and researchers. To guide future efforts of community health initiatives, we systematically analyzed challenges we encountered and the lessons learned.

We systematically reviewed daily logbooks, meeting minutes and press releases about the initiative to identify successes, unexpected challenges and barriers in its implementation. Comments from two reflective workshops held in the partner community identified additional areas of knowledge. Retrospective content analysis of these sources uncovered emerging process-related themes.

Success was evident in a high degree of citizen participation in initiative-related forums. Challenges included a greater need to a) develop a common vision before starting initiative activities, b) establish an effective collaboration between community residents and our team, c) create more transparent lines of communication, foster trust and better manage community expectations. Establishing a project office in the community for regular updates, trust building and partnering with a professional communication agency were key steps that helped turn some challenges into successes. Barriers identified were missing resources both within the community and our team, a limited time period and limited possibilities of reach into all systems within the community (e.g. kindergartens).

The use of the method of retrospective process analysis helped to uncover detailed insights into the operational implementation process of a community health initiative. These insights serve as a transfer of practical knowledge, which intends to enable researchers and practioneers within communities to plan and conduct their community health initiatives to large success.

Key messages:

- Analyzing the process of health initiatives retrospectively uncovers detailed insights into implementation processes and helps to understand successes, challenges and barriers of the initiative.
- Insights into the implementation process of health initiatives function as guidance to other researchers and practioneers to support future efforts in the field of community health.

Perceived needs of elderly for living a self-reliant life: implications for municipal health policy

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Background:

The population in the Netherlands and in the municipality of Oss is getting older in good health and wellbeing, living more independently and self-reliant with changing needs of support (Hilderink, 2018). However, offered support by health care and wellbeing professionals has not changed. Since it is unknown whether offered support matches the changed needs, the municipality of Oss wanted to know what elderly perceive supporting them in self-reliant life so they could be empowered by more effective supported and more efficient use of staff and finances. Results might have implications for more municipalities with an aging population.

Methods:

41 Elderly (age 65-92 y) in Oss were invited to enjoy a meal prepared by their grandchildren at their school and attend a Structured Interview Matrix-session (O'Sullivan et al., 2013) at the same time to map their perceived needs for an self-reliant life. Collected voice recorded data were transcribed and analyzed using thematic analysis (Braun & Clarke, 2006).

Results:

Results show that elderly prefer living independently, self-reliant and being self-supporting as long as possible first in physical mobility (walking, biking, driving a car), second in socially with respectively their children, friends and neighbors and third in financially independency. When inevitably getting dependent, they prefer help from children, friends and neighbors for practical daily living activities (e.g. cleaning, gardening, groceries). However, concerning medical care they prefer health and wellbeing professionals with general practitioner and municipality as gateway.

Conclusions:

Elderly want to be self-reliant as long as possible, living in their own house and neighborhood. When getting dependent, they prefer friends and neighbors for assistance in daily living and support from health and wellbeing professionals only for medical assistance with a key role for the municipality and general practitioner.

Key messages:

- Elderly prefer living a self-reliant life as long as possible in their own house and neighborhood.
- Municipal health services are perceived to play a key role in supplying adequate support from Health and wellbeing professionals.

Improving Health Literacy in Austrian Companies: Results from a Systematic Company Recruitment

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Issue:

The HL-Survey-EU-2011 showed limited health literacy (HL) among the Austrian population (51,6%), especially in the federal state of Styria (63,1%). The project ‘‘Auf Gesundheitskurs - gesundheitskompetent in Feldbach’’ focuses on individual and organizational HL by training and educating production and service company workforce in a rural region in Austria.

Description:

The population in the target region is especially disadvantaged regarding HL due to the parameters of age, gender, education, income and ethnicity. There are several small and medium-sized businesses within this area. This project (2018-2020) aims to improve knowledge, competences and skills of multipliers from different companies concerning organizational and individual HL, based on an in-person training programme. However, in order to recruit participants for this research project, a systematic recruitment approach was used.

Results:

A total of 783 companies, listed in the community database, were contacted via email in order to inform about the project and to invite for an interview. After the initial email, 40 companies were selected, based on four characteristics: industry sector, company size, distance to town centre, relevance to HL, and contacted via phone as well. However, 7 companies out of 783 confirmed the first interview and 6 out of 7 signed the project cooperation. 18 out of 40 phone contacts led to personal meetings, 9 resulted in signing the cooperation. In total, 15 companies have decided to participate in the project.

Lessons:

Overall, telephone contact led to much higher response rates than email alone. The parameters which effected positive outcomes during the interaction by phone and in-person were demonstrating benefits (healthy workplace, motivated staff, positive atmosphere, new customers), explaining the practical value, clarifying costs, expenditures and time effort. Although the topic of workplace health promotion is popular in this rural region, the focus on HL is new.

Key messages:

- Key factors in company recruitment for HL initiatives in rural regions are telephone and personal contact.
- Pointing out specific benefits for companies within the recruiting process seems also crucial.

School children’s perspectives on food literacy as competencies – insights from a qualitative study

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Background:

Food literacy (FL) has developed as a relatively new theoretical concept, which according to Benn (2014) captures not only knowledge about healthy food (to know) and cooking skills (to do), but also the sensing of food (to sense), care of others (to care) as well as citizenship involvement in food issues (to want). Empirical studies of the concept are, however, few. The aim was to test the applicability of the 5 theoretical competencies of food literacy in school children aged 12-14 years.

Methods:

The operationalisation of the theory into a practical context occurred in three steps using a qualitative approach; 1) Concretizing the domains of the model by defining sub elements to each domain and questions to each sub element. 2) Reviewing questions by a panel of 10 experts in food and education, and subsequently adjusting and reducing according to comments. 3) Conducting participatory observations on a food camp and 4 focus group interviews with a total of 21 school children.

Findings:

In practice the competencies are often complementing each other as described by the theory. In relation to the competence ’to know’, the children argued how they achieved more knowledge through hands-on activities. An important element of the competence ’to do’ was getting support from adults when trying new techniques. ’To sense’ was illuminated in the children’s talks about learning to seasoning. ’To care’ was apparent in the children’s appreciation of making food together and the development of cooperation skills while ’to want’ was observed in making of leftovers into ‘‘new’’ dishes and talks on subjects such as food production.

Conclusions:

The 5 competencies can be found in everyday practices and are often complementing each other in a learning process. This highlights the need to build on a broad concept of food literacy that addresses more than one competence hence creating broader understandings and practical skills.

Key messages:

- This study has tested the applicability of a theoretical concept, food literacy, and has found it useful in practice to highlight specific competencies and their interconnectedness.
- The insights into practical examples of the interconnected competencies can be used to guide future interventions that aims to promote food literacy.

A Bridge to Wellness: Gains from a health fair among fishermen in the Port of New Bedford, USA

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Background:

Globally, it has been noted that fishermen have a higher mortality from cardiovascular disease, cancer, and injury from work-related accidents when compared to the general population. A potential increase in unemployment in fishermen in

New Bedford could result in a lower income level which relates to an increase in risk behaviors, less health screenings, and negative health behaviors. While there is a lack of health-related data among fishermen across the globe, there is little information regarding the health among fishermen, who are predominantly immigrants, in the US.

Objectives:

The objectives include designing a health promotion fair to prepare nursing students with the skills to educate fishermen associated with nutrition, diabetes mellitus, cancer and hypertension as identified by key informants in the community.

Results:

Students expressed gains in achieving nursing competencies related to collaboration, communication, and teaching/learning by designing a fair with stations related to the four health topics with posters and activities. Educational materials were available in both Portuguese and English to support this aggregate who expressed learning new knowledge. Networking among local fishing agencies, nursing students and the fishermen supported this project from start to finish.

Conclusions:

Despite limited access to this vulnerable group, learning nursing competencies and increased fishermen's knowledge were realized. Connecting students with vulnerable populations is an effective way to promote learning for both groups.

Key messages:

- Multiple gains are noted when nursing students are paired with vulnerable community aggregates.
- Learning to work in the community with local agencies and groups is an effective teaching/learning pedagogy.

Internalization of rules and risk-behavior among early adolescents and relevance for public health

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Introduction:

Self-determination theory (SDT) is a macro theory of human behavior and provides a substantial theoretical background for understanding and changing qualitative aspects of behavioral regulation such as the level of internalization in the context of health-related behaviors of individuals and communities. The aim of this study is to use this theory to focus on the internalization of parental rules in early adolescents in Slovakia and examine it in relation to their risk behavior.

Methods:

A sample of 581 early adolescents (mean age = 12.5 SD = 0.5; 49% girls) from Slovakia participated in a larger project focusing on health-related behaviors (APVV-0253-11, APVV-15-0662). They completed measures based on SDT addressing the level of internalization or parental rules and the risk behaviors of alcohol use and smoking. These risk behaviors were measured on a dichotomous level (used/ not used). Binary logistic regressions were used to explore the relationship between the level of the internalization of rules with respect to alcohol use and smoking controlling for the relevant variables.

Results:

The results of the analyses showed that after controlling for age and gender, internalized parental rules were negatively associated with alcohol use (95%CI = 0.918-0.981). Conversely, the extrinsic regulation of parental rules indicated a higher likelihood of using alcohol (95%CI = 1.039-1.151). However, this was not observed in smoking which was found to not be associated with rule internalization.

Conclusions:

The findings stress the importance and relevance of the internalization process when studying behavioral regulation in the context of health. This was demonstrated in the internalizing of parental rules among early adolescents. However, the findings also suggest that a different approach might be needed with different contexts and different health related behaviors.

Key messages:

- Acknowledging the importance of the qualitative aspects of self/behavioral regulation such as the level of internalization may improve public health interventions.
- A different approach might be needed when internalization is considered in different contexts and different health related behaviors.

Eating disorders among university students: a public health challenge. An European study

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Background:

Eating disorders (ED) and behavioural risk factors among students in higher education remain to be investigated. The aim of the study was to identify the prevalence of ED and the behavioural factors associated with ED in university students in four European universities: Chisinau (Ch) in Republic of Moldava, Cluj-Napoca (CN) in Romania, Miskolc (Ms) in Hungary and Rouen (R) in France.

Methods:

In the four countries, students in higher education completed an anonymous standardized self-questionnaire, from 2016 to 2018. The questionnaire collected age, gender (M, W), housing, curricula, smoking, cannabis consumption, alcohol abuse problems (ADOSPA test), and perceived stress (Cohen score). The Sick, Control, One stone, Fat, Food (SCOFF scale) screening test was used to identify student with ED.

Results:

A total of 3076 students were included, 705 in Ch, 582 in CL, 534 in Ms and 1255 in R. The sex-ratio was M:F = 0.31 Ch, 0.30 in CN, 0.44 in Ms and 0.66 in R. The mean age was 21.2 (SD = 3.98) in Ch, 21.2 (SD = 3.2) in CL, 23.8 (SD = 5.1) in Ms and 20.0 (SD = 3.4) in R. The global prevalence of ED was 23.8%. According to the gender, the prevalence of ED in the four universities was 14.7% in M and 38.3% in W in Ch, 21.8% in M and 24.7% in W in CN, 19.7% in M and 21.4% in W in Ms and 16.1% in M and 34.0% in W in R ($p < 10\text{-}4$). After logistic regression, significant positive relation between the positive SCOFF was observed with female gender, alcohol abuse problems and stress level.

Conclusions:

ED prevalence patterns were quite similar in the four countries, with high prevalence of ED, even in men. Associated behavioural risk-factors were quite similar. It might be necessary in the future to screen students for potential ED upon entry to the university and also to inform student about the risk of ED and advise them to consult a healthcare professional.

Key messages:

- Our study highlights the high prevalence of eating disorders, with similar behaviours in university students in four countries.
- Because of the detrimental effects of ED on physical and emotional health, it seems mandatory to set up public health programs (health promotion, prevention).

Learning from calorie posting/traffic light systems introduction in a University hospital canteen

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Calorie posting is now policy in hospitals in Ireland and restaurants will be required to display calorie counts on menus by end of 2019. The Health Promotion, Dietetics and Catering teams worked together to introduce calorie posting and a traffic light system (TLS) for all foodstuffs available in the staff canteen of a large University teaching hospital in Dublin, Ireland. A calorie posting launch took place in September 2018. The aim of this study was to determine staff perception of calorie posting and TLS.

One month after the launch, 343 staff members were surveyed using a short pre-designed Sphynx-software questionnaire at 3 time points daily over one week, at breakfast, lunch and evening mealtimes. SPSS was used for analysis.

Of the 353 respondents (65.3% female; 18-44 years 65.3%, 45+ 32.1%, unknown 2.6%), more staff found calorie posting helpful compared to TLS (66.5% vs 43.7%; p = 0.001). Staff stated they made themselves aware of calorie count always/mostly (46%) and sometimes (26.2%). More females than men found both calorie posting (72.3% vs 53.3%; p = 0.001) and TLS (49.1% vs 31.8%; p = 0.001) helpful. More respondents identified calorie posting than TLS as influencing food choice at least sometimes (60.3% vs 36%; p = 0.0001). Females were more likely to make a food choice change based on TLS (39.7 vs 20.6%; p = 0.01). Age and frequency of canteen use were not associated with either.

The results suggest calorie posting is used rather than TLS by all hospital staff and female hospital staff are likelier to use both. Learning from this study, the positioning of TLS in relation to individual foodstuffs has been reviewed, further promotion of TLS/calorie posting has taken place in the hospital and a regular audit has been established. Notwithstanding the challenges, important moves towards healthier choices were seen.

Key messages:

- Introduction of traffic light system and calorie posting needs evaluation.
- Females appear more likely to avail of traffic light systems and calorie posting in relation to food choices.

Health literacy and physical activity as buffers to counter act work related stress

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Background:

Stress health problems affect 47.8% of the work force in Portugal. It is predicted that, in the next decade, these problems will overcome musculoskeletal disorders, the first cause of employee's withdrawal from work. Research indicates connections between stress and dimensions of the work place (like job satisfaction). Nevertheless the conceptual understanding of these relationships is sparse. In order to better understand these relationships, this research focus on the use of job–specific models of stress, associating them with health literacy (HL) - in the context of the European Health Literacy Survey framework (HLS-EU) - and physical exercise.

Methods:

A total of 748 participants from the different offices of a company in the financial sector (Portugal, main land and autonomous territories) participated in a cross sectional survey (CAWI). Age ranged from 25 to 65 years and HL was measured using the HLS-EU instrument validated to Portuguese (HLS-EU-PT). Each participant was allocated to one of the groups, either of satisfactory HL (when scores ≥ 30) or insufficient HL (when scores <30).

Results:

Out of the 748 participants (58.7% males, average age of 39 years), 80.4% sometimes and very often experience stress and tension in the workplace. Less than one in every two (44.4%) practice physical activity several times a week. Of the participants, 7.1% have inadequate, 39.0% problematic, 36.6% sufficient and 17.3% excellent HL (HLS-EU-PT). Employees that are more active are those who experience lower levels of stress.

Conclusions:

The research of the effects of HL combined with physical exercise, as buffer variables to problems related to the effects of work stress, is a new area of research that may help understand patterns of adherence to activities that can help workers deal with everyday working conditions. More research is needed to integrate HL strategies in the work place.

Key messages:

- Stress health problems affect 47.8% of the work force in Portugal.
- Employees that are more active are those who experience lower levels of stress.

Importance of Health literacy in magnesium supplementation - Case study Novi Sad, Serbia

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Background:

Currently the market offers wide range of magnesium dietary supplements that vary either in their pharmaceutical dosage form (capsules, tablets, direct form, effervescences etc.), magnesium compound present (magnesium oxide, - chloride, -citrate,- bisglycinate, -acetyltaurinate etc.) their dosage (ranging from 150 to 400mg) or other vitamins and minerals present (vitamin B complex, vitamin C, zinc, manganese etc). Since the public can now choose to buy dietary supplements not only from pharmacies and specialized stores but from places such as supermarkets, cosmetic shops or even markets it is important to educate the public and help them make healthier choices.

Objectives:

While providing primary health care services in public pharmacy, overall choices and reasons for buying magnesium supplements were noted during the first four months of 2019 (January to April). The goal was to investigate the most important factors patients consider when opting to take magnesium supplements as well as their health literacy regarding the topic.

Results:

The results indicate that the currently most popular choices are mouth dissolving forms of magnesium (more than 50% units sold), and predominantly forms the magnesium oxide form (around 75%). It is suggested that the most important factors when choosing magnesium dietary supplements are its price, media presence, friends advice, general familiarity or even product design as very few the patients asked about the present form of the magnesium.

Conclusions:

Magnesium dietary supplements belong to highly desirable supplements on the free market. It is observed that patients choice mostly doesn't coincide with health authorities recommendations.

Key messages:

- Importance of health literacy and understanding the dietary supplement labels.
- Higher impact of sources of information other than healthcare authorities.

DP Infectious diseases, preparedness and vaccines

Age, period, and cohort effects on infectious disease mortality in Korea, 1983-2017

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Background:

Infectious diseases are a leading cause of death worldwide, and constitute a significant burden of disease, even in developed countries including Korea. Although different ages, periods, and cohorts may affect mortality, few studies analyzed the epidemiologic pattern of infectious disease mortality considering these effects. This study aimed to estimate the age-period-cohort effects on infectious disease mortality in Korea.

Methods:

The national death certificate and census mid-year population estimates data from 1983 to 2017 were categorized into 5-year age groups and 5-year periods. Infant deaths were excluded due to incomplete data. Intrinsic estimator regression models were fitted to estimate age-period-cohort effects on infectious disease mortality.

Results:

A J-shaped age effect declined from age 1-4 years (intrinsic estimator coefficient [IEC] 0.68; 95% confidence interval [CI] 0.52, 0.85), the lowest at age 20-24 years (IEC -1.68; 95% CI -1.85, -1.51), and then increased with age. The declining trend of period effects was slowed down in 1998-2002 (after the 1997-1998 Asian economic crisis), and turned to an upward trend from 2008-2012 (after the 2008-2009 global financial crisis). The cohort effect increased from the earliest cohort born before 1905 (IEC -1.17, 95% CI -1.35, -0.98), peaked in the 1941-1945 cohort (IEC 1.20, 95% CI 1.10, 1.29), then plateaued out (IEC ranged from 0.93 to 1.10), and has continued to decline since the 1966-1970 cohort in which rapid economic growth began.

Conclusions:

There were clear age, period, and cohort effects on infectious disease mortality in Korea. Through the period and cohort effects, the economic downturn and upturn might have increased or reduced infectious disease mortality, respectively. Recent upward trend in infectious disease mortality after the 2008-2009 financial crisis suggests a need to strengthen prevention and control of infectious diseases.

Key messages:

- It is important to consider age-period-cohort effects in identifying the epidemiologic pattern of infectious disease mortality trend and finding its underlying drivers.
- Economic cycle might have influenced infectious disease mortality through period and cohort effects.

Survey of nosocomial influenza in South-western Swiss hospitals during two seasonal epidemics

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Nosocomial influenza increases morbidity and mortality in hospitalised patients. No multicentre study analysed its impact in Swiss hospitals yet. This study was conducted From November 1st to April 30th in 2016-2017 and 2017-2018 in 27 acute-care public hospitals in South-western Switzerland. It aimed at describing nosocomial cases of seasonal influenza. During these 2 time-periods, every patient hospitalized for >72 hours that was positively screened by RT-PCR or antigen detection for influenza was retrospectively included in the survey. Policies to prevent influenza were collected in each participating hospital. Characteristics of patients included age, sex, and comorbidities. Included patients were followed-up until discharge or death. Complications and administration of anti-neuraminidases and/or antibiotics were registered.

The mean influenza vaccine coverage of healthcare workers (HCW) was 40%. 836 patients were included (98% with a type A influenza virus in 2016-2017; 77% with a type B virus in 2017-2018). Most patients (81%) had an unknown vaccine status. Overall, the incidence of nosocomial influenza was 0.3/100 admissions (0.35/1000 patient-days). The most frequent comorbidities were diabetes (21%), chronic respiratory diseases (18%), and malnutrition (17%). Fever (77%) and cough (66%) were the most frequent symptoms. 70% of patients received anti-neuraminidases, 28% received antibiotics. Infectious complications such as pneumonia were reported in 8%. Overall, the all-cause mortality was 6%.

The occurrence of nosocomial influenza underlines the importance of vaccinating patients and HCW, rapidly recognising community or hospital-acquired cases, and applying adequate additional measures to prevent dissemination, including the timely administration of anti-neuraminidases to avoid antibiotic use (and misuse).

Key messages:

- Important to encourage patients to be vaccinated against influenza.
- Apply additional measures in order to prevent influenza dissemination.

Seroprevalence of anti-Parvovirus B19 IgG in childbearing age women in Pleven region (Bulgaria)

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Background:

Parvovirus B19 is a widespread infection in childhood. Seroprevalence of anti-Parvovirus B19 increases with age and about 60% to 70% of women of childbearing age have serological evidence of past exposure to virus. Diaplacental

Parvovirus B19 infection in pregnant women can lead to anaemia, non-immune hydrops fetalis and foetal death. The aim of the study is determining the susceptibility to Parvovirus B19 in childbearing age women.

Methods:

We conducted a prospective seroepidemiological study in which 90 healthy women of childbearing age (19 to 40 years) were tested during the period September-October 2018 in Medical Center "Clinical Institute for Reproductive Medicine"- Pleven, Bulgaria. Participants were surveyed on a voluntary basis. The exclusion criteria were: presence of autoimmune disorder, immunosuppressive states, malignancy and populations at risk such as persons under 18 years of age and pregnant women. The presence of specific Parvovirus B19 IgG was detected using a standardized anti-Parvovirus B19 (IgG) ELISA kit. The demographic and anamnestic data were collected for each participant in Case Report Form.

Results:

The average age of the women was 31.4 ± 4.9 years. Dominating were women with higher education (52.2%) living in urban areas (92.2%). The survey results showed that 37.8% of women were positive for anti-Parvovirus B19 IgG, 61.1% were negative and 1.1% equivocal. Immunty to the virus increased from 27.3% to 45% with age. There was no significant correlation between the presence of antibodies and the demographic factors (living area, education and number of family members).

Conclusions:

The results of this study imply that 61.1% of the childbearing age women in Pleven region are susceptible to infection with Parvovirus B19. Because of the high susceptibility to Parvovirus B19, active monitoring of risk groups pregnant women for the prevention of fetal complications is recommended.

Key messages:

- There is no specific treatment or prophylaxis against Parvovirus B19 infection and epidemiological surveillance requires the introduction of effective preventive measures at the public health level.
- Active monitoring in childbearing age women is necessary to reduce the risk of fetal damage and the cost of healthcare associated with the infection.

Effect of rotavirus vaccination offer to children observed in Italy between 2010-2018

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Background:

Rotavirus (RV) is the most common cause of gastroenteritis (GE) among children under 5 years. Since 2012 Friuli Venezia Giulia (FVG) Region (Italy) has offered free RV vaccination to low birthweight preterm and other at-risk babies. Starting from 2018, the offer has been extended to all newborns. Aim of the study is to investigate the effectiveness of RV vaccination offer on coverage and GE-related hospital admissions among FVG children under 1 year between 2010-2018.

Methods:

With a retrospective analysis we identified FVG Region children <1y with at least one dose of RV vaccine and children <1y admitted to hospital with a diagnosis of Non-Specific GE (NSGE; ICD9-CM codes 001-009) and RVGE (008.61) from 2010 to 2018. Vaccination coverage and hospitalization risk in each annual child cohort were calculated. Hospitalization and vaccination data were also linked using a univocal anonymous stochastic key.

Results:

Of 77,330 children (51% males) born in FVG during 2010-2018, 8209 (11%) were vaccinated for RV. Coverage progressively increased from 0.2% in 2010 (22/9736) to 23% in 2017 (1782/7747) and then almost tripled in 2018 reaching 67% (5006/7425). During the 9 years observed, 414 children were hospitalized for NSGE (0.5%) and 172 for RVGE (0.2%). NSGE hospitalizations started from 48 (0.5%) in 2010 and reached 58 (0.8%) in 2018. Admissions for RVGE were 27 (0.3%) in 2010 and decreased to 15 (0.2%) in 2018. Annual hospitalization rate fluctuated with no clear pattern. In the observation period, 11 RV vaccinated children were admitted to hospital for NSGE (2.6% of total NSGE admissions), 1 of them specifically with RVGE.

Conclusions:

The offer of RV vaccination to newborns results to be effective to gain vaccine coverage among children under 5 years. The impact of this offer on GE-related hospital admission and RVGE in particular cannot be properly evaluated yet, as not enough time has passed since the implementation of free offer to all newborns.

Key messages:

- Defining and implementing an appropriate vaccination offer is essential to ensure adequate levels of coverage against Rotavirus among children under 5 years.
- The evaluation of the effect of Rotavirus vaccination on hospital admissions for NSGE and RVGE needs a careful and continuous assessment in next years.

Evolution of Healthcare-associated infections over five years: results of prevalence surveys

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Background:

Tunisia is not spared from the scourge of healthcare associated infections (HAIs). National surveys on the prevalence of HAIs on a given day have regularly taken place in health facilities. We aimed to describe bacteriological profile as well as treatment modalities of HAIs in Sahloul Hospital for the last five years.

Methods:

We conduct every year a prevalence survey, as part of the program for the prevention and control of HAI at Sahloul Hospital. It is a cross-sectional study of one-day prevalence with a single pathway. All departments were included in the survey, except emergency and hemodialysis services due to their very short length of stay. Data collection was carried out using NosoTun plug (national HAI prevalence survey).

Results:

Over five years, prevalence of HAI ranged from 11.4% in 2014 to 7.1% in 2018. In 2014, bacteriological analysis was performed in 55.8% of HAI cases. In 66.6% of cases (n = 16), isolated bacteria were gram negative bacilli, the most frequent were Pseudomonas aeroginosa. In 2015, 17 germs were identified, and in 88.2% of cases (n = 5), isolated pathogens were also gram-negative bacilli, the most frequent were Pseudomonas aeroginosa (n = 4) and Acinetoobacter baumanii (n = 3). Besides, cephalosporin 3rd generation was the most frequent antibiotic used for the treatment. However, in 2016, Klebsiella Pneumoniae was the most frequent germ isolated. Among those infected patients, 26 were treated (92.8%). In 2017, 26 germs were identified, the most frequent were Gram Negative Bacilli (53.8%), mostly Escherichia coli and Pseudomonas aerginosa, followed by Acinetobacter baumanii. in 2018, 16 germs were identified, the most frequent were Gram Negative Bacilli (55.5%), mostly Klebsiella Pneumoniae.

Conclusions:

The challenges for the future are to minimize infection with gram-negative bacilli while limiting the emergence of antibiotic resistant organisms.

Key messages:

- Our study helped us to have an insight into the most common isolates identified throughout the last five years.
- An incidence survey was carried out to better highlight the impact of healthcare associated infections in our hospital.

A systematic review of prediction models used in tuberculosis contact tracing

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Background:

Contact tracing forms a key part of tuberculosis (TB) control in high-income, low-incidence settings. It aims to reduce morbidity, mortality and onward transmission of TB. Contact tracing is a complex and resource intensive intervention. Risk assessment of contacts is needed to ensure appropriate allocation of resources and greatest possible impact. Current prioritisation procedures are based on expert opinion and consensus. Prognostic prediction models offer a way to synthesise evidence about this decision.

Methods:

We searched Medline, Embase, BNI, CINAHL, HMIC, and the Cochrane Library for peer reviewed publications in English about TB contact tracing prediction models. Studies were included if there was statistical combination of predictors. No date, age or other restrictions were applied. Study selection was carried out by two independent reviewers. Data were extracted using the CHARMS checklist and studies evaluated for risk of bias using PROBAST.

Results:

Five reports were selected from a total of 16,585 non-identical returns. Each study was carried out in demographically distinct settings (Peru, USA, France, Taiwan). The choice and definition of outcomes and predictors varied. All the models included external validation and some included internal validation. Calibration and discrimination measures were variably reported. The models were at high risk of bias due to challenges in defining TB disease and due to statistical approaches taken: there was poor reporting of sample size considerations, universal use of univariable analysis to select predictors, and dichotomisation of data. There were some concerns about applicability due to differing populations and diagnostic approaches. None of the models included social risk factors.

Conclusions:

The use of existing models is problematic. There are constraints upon resources which means that contact tracing needs to be carried out efficiently. A robust prediction model is urgently needed to achieve this.

Key messages:

- Contact tracing for tuberculosis would benefit from more robust prioritisation tools to save resources and increase impact.
- Existing prognostic prediction models are at high risk of bias and there are concerns about applicability in high-income, low-incidence settings.

Measles situation in Ukraine during the period 2017-2019

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Background:

Measles remains a significant cause of death among children globally, despite the availability of effective vaccine. While global measles deaths have decreased by 84% worldwide from 2000 to 2016, measles is still common in many countries, particularly in Africa and Asia: during 2016 7 million people were affected. In Ukraine 12,000 people suffered from measles in 2012. The last outbreak in Ukraine started in 2017, continued in 2018 and it is ongoing in 2019. Totally about 100,000 people fell ill, 31 died and it is one of the biggest outbreaks in Europe in the last 20 years. Our work was aimed to analyze the measles outbreak in Ukraine and find out its causes in 2017-2019.

Methods:

We conducted an analysis of measles incidences in Ukraine during the period 2017 - 2019 using analytical and epidemiological methods.

Results:

The number of reported measles cases was: in 2017 - 4782 in 2018 - 53,219, 3 month of 2019 - 34,188. In 2016 the number of measles cases was 102. The incidence rates of measles per 100,000 population were: in 2016 - 0,24; in 2017 - 11,2; in 2018 - 125,2; in 2019 (3 month) - 80,4. Comparatively to the 2016 incidence rates increased 46 times in 2017 and 521 times in 2018. The percentage of children among suffered people was: in 2017 - 66,6%; in 2018 - 55,3%; in 2019 - 47,8%. According to the national vaccination schedule, 1 dose of MMR (MMR1) vaccine children get in 12-month age, the second dose (MMR2) - in 6-years age. Vaccination coverage of MMR1 and MMR2 vaccines has significantly decreased during the period 2008-2016 from 96% to 45% due to challenges in the procurement of vaccines in the country and antivaccination campaigns.

Conclusions:

Measles epidemic situation was caused by accumulation of a significant pockets of non-immune population.

Key messages:

- Measles epidemic situation was caused by accumulation of a significant pockets of non-immune population.
- The robust supplementary vaccination campaign among children and adult will allow to overcome measles outbreak in Ukraine.

Influenza vaccine among future health care workers: a cohort study on Italian medical students

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Background:

Flu vaccination rates among health workers remain low and very variable between European countries despite the recommendations. Medical schools could be the best phase to educate health workers toward flu vaccine. This study aims to evaluate flu vaccine ‘‘prejudice’’ and vaccine hesitancy in medical students (MSs).

Methods:

In 2018/19 flu season a cohort study was conducted at the School of Medicine of Turin, parallel to the flu vaccination campaign. Students were surveyed for sociodemographic variables, knowledge, attitudes and practices toward vaccination, adverse reactions, overall satisfaction toward received vaccination. Data was collected from 377 students. Multivariable logistic regressions were performed. The significance level was $p \leq 0.05$.

Results:

Females were 70% and median age was 24 (IQR 22.5-25). The 73.2% of the sample was vaccinated in the campaign, although the 60% of this had never been vaccinated before. Poor knowledge on flu vaccine, both self- and objectively assessed, was associated with lower vaccination rate (OR 0.23, $p = 0.006$; OR 0.15, $p < 0.001$ respectively). Vaccination was more likely in those who had been vaccinated in the last 3 years

(OR 9.14, $p < 0.001$). Among non-vaccinated students, most frequent reasons to not undergo vaccination was not feeling at risk of contagion (48%). Vaccine decreased flu prevalence (OR 0.33, $p = 0.039$). Among vaccinated students, the persuasion that vaccination should be mandatory for health workers (OR 5.91, $p = 0.039$) was associated with higher vaccine satisfaction score while self-diagnosis of flu was associated with a lower score (OR 0.009, $p < 0.001$).

Conclusions:

Lack of flu vaccination among health workers increases flu prevalence and multiplies possible carriers in health facilities. European Medical Schools should start yearly vaccination campaigns to promote good habits in MSs. In parallel, more must be done to teach MSs the benefits of flu vaccination and thus increasing willingness to being vaccinated.

Key messages:

- Feeling poorly informed and being poorly informed about influenza vaccine significatively decrease likeliness of vaccination in medical students. Students do not feel at risk of contagion.
- Influenza vaccine uptake is a habitual behavior that should be promoted as early as possible among European health workers, possibly during Medical School.

Assessment of the links between awareness about MI and behavior related to vaccination

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Backgrounds:

In Lithuania, the morbidity rate of meningococcal infection (MI) is one of the highest in the European Union. In year 2017 - 81 MI cases were reported (2.9 cases / 100 thousand inhabitants). The aim of the study - to assess the links between awareness of parents of pre-school children about meningococcal infection and behavior related to vaccination.

Methods:

Anonymous questionnaire survey was carried out in pre-school educational institutions of Kaunas city in 2019. 165 questionnaires were presented to parents (response rate 91.52%). Associations between categorical variables were measured using Chi square test. A statistically significant difference was defined when $p < 0.05$. Z criterion was used for evaluating hypothesis of variable dependence.

Results:

55.0% of respondents know that MI is caused by bacteria and it is spread by air (84.8%). 40.1% of parents indicated that they have vaccinated their children or are planning to do so. 38.0% of respondents chose not to have their children vaccinated and did not plan vaccination in the future. Answers of parents, who have vaccinated or are planning vaccination of their children, showed a statistically significant increase of awareness of the risk of MI spreading by air (44.4% and 0.0%, $p < 0.05$) and that in order to avoid the risk of MI (42.3% and 0.0%, $p < 0.05$) children need to be vaccinated following recommended vaccination plan (53.4% and 25.0%, $p < 0.05$), as well that in Lithuania MI vaccine has been included in the recommended vaccination plan in 2018 (43.7% and 12.5%, $p < 0.05$).

Conclusions:

More than half of the respondents know the pathogen of the MI, the way of it spreading, but less than half of them have vaccinated or are planning to vaccinate their children. Links have been identified between the vaccination of children and awareness of the ways of MI spreading and prevention of it.

Key messages:

- The behavior of parents with better awareness is related to decision of vaccination.
- Parents with better awareness have vaccinated or are planning to vaccinate their children from MI.

Laboratory based Influenza sentinel surveillance in Pakistan At NIC, Islamabad 2007-2017

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Background:

A country-wide lab-based surveillance system for ILI and Severe Acute Respiratory Illness (SARI) with weekly sampling and reporting was established in 2008.This system was necessary for early detection of emerging novel influenza subtypes and timely response for influenza prevention and control.

Objectives:

To assess the trends of Influenza-like-Illness(ILI) and to monitor the predominant circulating strains of influenza viruses through Lab based sentinel surveillance.

Methods:

A cross-sectional study was conducted based on ten years (2007-2017) influenza surveillance data obtained from National Influenza Central Laboratory Pakistan (NICLP) from January to March 2018.Study was done from the data records and samples of suspected ILI patients and SARI patients received from all seven sentinel sites. An ILI case was defined as sudden onset of fever of ≥ 38 C$^\circ$ and cough, with onset within last 10 days, while patients with sudden onset of fever (>38 °C), cough/sore throat requiring hospital admission within 7 days were termed as SARI. Samples were tested at NICLP for confirmation of virus, typing and subtyping by RT-PCR.

Results:

A total of 15885 samples were analyzed during ten years period, out of which 3475(21.9%) were found positive for influenza virus. Among positive samples 26(0.75%) were Influenza-A (H1N1), 550(38%) were A/H3N1,550(15.9%) were A/H3N1,1587(45.7%) were A/H1N1 pdm09and 1312(37.8%) were influenza B. Males were predominant(54%).Influenza Maximum cases were reported from age group 01->12 years(66%).Virus circulation was detected throughout the year along with few cases of seasonal A/H1N1 virus during late winter(January February) and spring(March). Influenza A/H3N2 virus circulation was mainly observed during summer months (August-October).

Conclusions:

The findings of this study emphasize the need for continuous and comprehensive influenza surveillance to predict seasonal trends for vaccine development and to further fortify pandemic preparedness.

Key messages:

- The need for continuous and comprehensive influenza surveillance.
- Public health importance by pandemic preparedness.

MRSA contamination in ambulances: a systematic review

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Background:

Methicillin-resistant Staphylococcus aureus (MRSA) is a multidrug resistant organism (MDRO) frequently involved in skin, soft tissue and bone infections. Moreover, it is one of the most frequently isolated pathogen in bloodstream infections in European countries. Because of its capacity to survive on inanimate surfaces, this microorganism could be detected not only on hospital environment, but also in other healthcare settings such as ambulances. We performed a systematic review in order to study the level of MRSA contamination in ambulances (vehicle surfaces and medical equipment).

Methods:

In March 2019 we searched studies in PubMed using the key search terms ''MRSA, ambulance''. We included different designs of studies in English.

Results:

The research yielded 18 publications: after title, abstract and full text's analysis, 9 manuscripts were included in this review. Studies were conducted from 2007 to 2018 in USA, Egypt, Poland, Germany and South Korea. Overall, the number of ambulances sampled for MRSA was 511 (min. 3-max. 150), and 64 (12.5%) resulted contaminated by MRSA. Sampling points examined for each vehicle varied from 5 to 33, for a total of 5872 (min. 39-max. 2136) samplings performed. The amount of MRSA positive samplings was 145/5872 (2.5%) (min. 1-max. 43). Stretcher resulted the most frequently contaminated fomite (29 of the 145 MRSA positive samplings, 20%).

Conclusions:

Despite MRSA prevalence is decreasing in Europe, recent studies showed how this MDRO could still be responsible of a remarkable burden in terms of attributable deaths and costs. Implementing effective sanitation procedures with a continuative monitoring of the processes is highly recommended in all the healthcare settings, including ambulances. Automated terminal disinfection of these vehicles, adopting technologies such as ultraviolet germicidal irradiation or hydrogen peroxide aerosol, could reduce bacterial contamination hosted on surfaces and medical equipment.

Key messages:

- Although the percentage of isolates of MRSA in European countries is decreasing, the burden this multidrug resistant organism in terms of mortality and costs remains remarkable.
- Ambulances must be considered as a potential reservoir of MRSA because of its ability to survive on inanimate surfaces, and adequate sanitation procedures should be frequently performed.

Evaluation of additional benefits of HPV vaccination to cervical cancer screening in France

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Background:

The National Cancer Institute (INCa) undertook the evaluation of the expected impact of HPV vaccination in the context of the recent marketing of nonavalent vaccine (Gardasil®9) and the implementation of organized screening (OS) of cervical cancer (CC) in France.

Methods:

The study is based on a microsimulation model that replicates the natural history of CC. A cohort of 14-year-old women is generated and followed until death. Others HPV-infection related diseases (condyloma, anal cancer, penile cancer and oropharynx cancer) are not modelled. Different strategies were compared with the current vaccination coverage rate (VCR) of 21.4% (2017): impact of increased VCR alone and increased VCR combined with correction of inequalities (CI). Results are presented according to two hypotheses for the duration of protection offered by the vaccine (limited to 20 years and lifelong) and according to two hypotheses for price of the vaccine (French price and average European prices).

Results:

The incremental cost-effectiveness ratio (ICER) was less than 15 000 euros per QALY (quality-adjusted life year) in all the assessed strategies. For each 14-year-old women cohort, 85% VCR with CI would prevent at least: 2 546 conations, 2 347 precancerous lesions CIN 2 / 3 diagnosed, 377 CCs, 139 deaths per CC (20 years vaccine protection). Scenarios based on increasing VCR with CI are the most cost-effective.

Conclusions:

The study quantifies the increased risk of CC-related outcomes associated with current sub-optimal VCR and the possible investment to implement actions in order to improve the efficiency of the current strategies and tackle health inequalities (communication campaign, actions toward underserved women).

Key messages:

- Improving HPV vaccination uptake is a cost-effective measure, even considering only the cervical cancer prevention.
- Including health inequalities participation in modeling is crucial as underserved women are both less vaccinated and screened.

Hospital acquired infection, evaluation of point of prevalence in a 147 beds italian hospital

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Background:

Hospital Acquired Infections (HAI) have become a public health priority worldwide, leading to higher medical costs, prolonged hospital stays, and increased mortality. The point of prevalence analysis (PPA) of HAI and antibiotics (ATB) consumption is extremely relevant for its social and economic impact. Aim of this study is to evaluate the prevalence of HAI and to analyze ATB consumption in 147 beds hospital.

Material and Methods:

This prevalence study was conduced on March 23, 2018, we analyzed the clinical documentation of 78 patients hospitalized in the Hospital of Val D'Elsa, Siena, Italy and searched for evidence of HAI and for all indication of ATB therapy in all hospital wards. HAI were defined according to guidelines of European Centers for Disease Control and Prevention (ECDC 4.2) using Stata 12.

Results:

We analyzed a total of 78 patients (51,3% female), average age was 71,6 (sd ± 23,4) years, mean lenght of stay 7,2 (sd ± 7,9) days. Patients included in the study were recovered mostly in General Medicine ward (62,8%); 23% of patients underwent surgery. Fifty-one point three of patients had Peripheral Venous Catheter, 17,9% Central Venous Catheter and 47,4% Urinary Catheter. Three infections were discovered (PPA 3,8%); 2 HAIs were found in Medicine ward, the third one in the Intensive Care Unit. The chi-square test did not show statistically significant differences with the last year's results in the same wards ($p = 0.3305$). Fifty-four percent of all patients received ATB, the most used class were third generation Cephalosporines (50%), followed by Carbapenems (19%) and Fluoroquinolones (7%).

Conclusions:

PPA of HAI was 3,8%, comparable to last year's (3,5%). This is a positive result when compared to regional and national point prevalence study realized by ECDC in 2012 (6,2% in Tuscany Region, 6% in Italy). Our analysis showed that ATB consumption was quite high: and it is in agreement with those provided by the Tuscany Region.

Key messages:

- in our hospital we report an excellent result about the pint of prevalence of hospital acquired infections 3,8%.
- The antibiotics consumption in our hospital is quite high, the most frequently used antibiotic class is the third generation Cephalosporines.

Increasing awareness about psittacosis among bird owners

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Background:

Visitors of bird fairs and bird owners in general are at risk of becoming infected by Chlamydia psittaci bacterium. This bacterium is mainly found in birds and can be transmitted to humans. The knowledge about psittacosis is limited among the general public, bird owners and even among doctors.

Awareness to health problems regarding psittacosis, is important. By increasing this awareness among bird owners we encourage them to report these health problems and bird contact to the general practitioner. Experience shows that it is difficult to reach this particular group. The aim of this study was to gain more insight in the characteristics of bird owners to develop methods for providing appropriate information. This information aims to increase awareness regarding psittacosis.

Methods:

The research adopted a qualitative approach and in depth interviews were held with sixteen bird owners using a semi-structured interview guide. The data collected was analysed using thematic analysis.

Results:

Four themes were identified: social network related to birds, relationship with birds, awareness of risks and symptoms of psittacosis, information channels.

Conclusions:

Most of the study participants were hobby breeders. They experience a strong connection with their birds and are experts in this field. In general they feel healthy. The bird owners are unaware of the fact they risk a disease as a consequence of their favourite hobby. However, they seem to be open for advice related to their health. It is recommendable to provide information from a near-by environment (e.g. through internet or at the local bird club) and use credible ambassadors. Increased awareness on the symptoms of psittacosis can be reached if appropriate information is received by bird owners. This might lead to more reports at the general practitioner and therefore prevents severe cases of psittacosis.

Key messages:

- Most bird owners were unaware of the health risks related to their birds.
- To prevent severe cases of psittacosis it is important to provide information from a near-by environment and to use credible ambassadors.

Vaccine hesitancy among parents in the general population in Sicily (South Italy): A survey study

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Background:

Vaccine hesitancy (VH) has become the focus of growing attention because of decreased vaccination rates and increased emergency department use, morbidity, and mortality. VH has not been deeply studied in Sicily. The aim of this study was to estimate the prevalence of VH among parents and to investigate the potential determinants.

Methods:

We performed a survey from 1 March to 1 June 2018, using a random sample of parents who reported on median 10 year-old children. The parents were recruited in pediatrician's offices and elementary schools. Information pertaining to socio-demographic characteristics, sources of information regarding vaccination and VH was collected. VH was calculated using the Parents Attitudes about Childhood Vaccines (PACV) questionnaire. Associations between VH and predictors were tested using Multivariable Logistic Regression.

Results:

In total 471 questionnaires were collected, 77.7% of respondents were mothers. Based on the PACV 100-point scale, 73.2% (95% CI: 69.0-77.2) of parents had a 0 to <49 score (low level of VH); and 26.8% (95% CI: 22.8-31.0) had a score of 50 and higher (high level of VH). Internet (66.9%, 95% CI: 62.4-71.1) was the main source of information on vaccination followed by television (29.1%, 95% CI: 25.0-33.4). In the bivariate analyses, VH was associated with education, marital status and occupation, but not with gender and age of parents. In multivariate analyses, highly educated (ORadj = 0.297, 95% CI = 0.141-0.626) and married (ORadj = 0.457, 95% CI = 0.213-0.977) parents were more prone to be nonhesitant, but not so unemployed parents (ORadj = 1.787, 95% CI = 1.083-2.956).

Conclusions:

The prevalence of VH among the Sicilian parents was comparable with other populations. These results could be an important starting point to support the implementation of effective vaccination strategies.

Key messages:

- Implement interventions and strategies to further understand the issue of VH, to restore trust in authorities and vaccines.
- Suggest strategies that could improve childhood vaccination rates.

Risk factors of healthcare associated infections: prevalence surveys over five years

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Background:

Healthcare associated infection (HAI) is alarmingly increasing in low income settings. In Tunisia, the burden of HAI is still not well described. We aimed to analyze risk factors independently associated with HAIs in hospitalized patients in Sahloul Hospital for the last five years.

Methods:

We conduct every year a prevalence survey, as part of the program for the prevention and control of HAI at Sahloul Hospital. It is a cross-sectional study of one-day prevalence with a single pathway. All departments were included in the survey, except emergency and hemodialysis services due to their very short length of stay. Data collection was carried out using NosoTun plug (national HAI prevalence survey). Logistic regression was performed to identify independent risk factors of mortality among infected patients with p value less than .05.

Results:

Over five years, prevalence of HAI ranged from 11.4% in 2014 to 7.1% in 2018. In 2014, independent risk factors of HAIs were the use of peripheral venous catheter, central venous catheter, and undergoing a surgery. Intensive care units and surgical departments were independently associated with the occurrence of HAIs. In 2015 and 2016, in addition to the factors already mentioned, antibiotic therapies for the last six months as well as parenteral feeding were also found as independent risk factors. In both 2017 and 2018, intrinsic factors were found in multivariate analysis; in fact diabetes as underlying disease was independently associated with HAIs.

Conclusions:

Identifying risk factors that contribute to develop HAIs may support the implementation of strategies for their prevention, therefore maximizing patient safety.

Key messages:

- Identifying risk factors for HAIs may improve patient safety.
- Insertion of medical devices was the main risk factor for patients over the five years.

Participatory action research for global antibiotic stewardship network in CPLP: mixed-method study

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Background:

Antibiotic stewardship services (ABS) contribute to antibiotic resistance (AR) global monitoring. Aiming at co-implement an ABS network within the Portuguese-speaking setting (CPLP), by enabling the evidence translation and second opinion between the countries, we surveyed Cape Verdean (CV) health professionals (HP) perceptions about AR prevention and control, assessing ABS opportunities.

Methods:

A Design Science with Participatory Action Research establishes a contextualized ABS process. This mixed-method study addressed the first 2 stages, the problem and objectives. Quantitative study considered the HP's answers (56 HP; 2 hospitals) to a questionnaire, about their perception on AR and ABS. Qualitative study set-up 10 open-ended structured interviews, clinical shift observation in 2 pilot-services (1 hospital), and meetings with key-elements for ABS, including leadership.

Results:

Key-stakeholders for ABS multidisciplinary teamwork were identified. Preliminary results are: 1. HP reveal some knowledge but lack of awareness on AR and ABS (eg. 34% don't recognize the AR local threat); 2. The absence of guidelines and lack of access to key-information affect prescribing confidence (eg. only 46% HP consider microbiology results in deciding antibiotherapy); 3. Priorities for a pilot service are the lack of qualified HP, the need to optimize material resources management and stock procurement, and the need for better access to patient's clinical and prescription information; 4. Digital resources and telemedicine system can be facilitators. Top-down communication and support are essential for the ABS process sustainability.

Conclusions:

A Global ABS network can be important in promoting prevention and effective control of AR, reducing differences between the CPLP countries. In CV, an educational program to support the co-design of ABS service and a decision-support information system are identified priorities. Digital health, like telemedicine, can be ABS facilitators.

Key messages:

- The implementation of a Global Antibiotic Stewardship network, aiming at reducing Portuguese-speaking Countries differences, could be leveraged by a Participatory Action Research process.
- An educational program, a decision-support information system and the telemedicine are key for the Global Antibiotic Stewardship network implementation success.

Evaluating latent tuberculosis testing and treatment programme for new migrants in South East England

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Background:

Tuberculosis (TB) cases in England often originate from high burden TB countries due to 'reactivation' of the latent TB infection (LTBI), an asymptomatic and non-infectious phase lasting years. 5,137 TB cases were notified in England in 2017, and 71% of these patients were born outside the UK. This mixed-method study evaluated the implementation of the four LTBI testing and treatment programme for new migrants in South East (SE) England.

Methods:

A retrospective database (May 2016-Feb 2018) review was undertaken to identify LTBI cases using multiple data sources; LTBI testing laboratories, LTBI programmes, and the national TB team at Public Health England. In addition, a survey questionnaire was emailed to 51 stakeholders (45% response rate) and five in-depth interviews were conducted with LTBI programme leads/TB nurses to explore the challenges of the programme. Quantitative data were analysed using descriptive summary statistics and qualitative interviews were analysed using thematic content analysis.

Results:

Of the 5931 eligible patients, 40 % (n = 2391) accepted the LTBI test and 13.4% (n = 321) tested positive. 93.1% (n = 299) of the positive patients were referred for treatment and 63.8% (n = 191) of these accepted the treatment. The programme also picked up 18 active TB cases, an unexpected incidental finding. Results from the survey and the interviews identified laboratory arrangements, workforce, and data collection/management as the greatest challenges for the LTBI programme. Patient focused care, cultural understanding, success in testing/treating migrants, and raising awareness amongst professionals/communities were highlighted as achievements of the programme.

Conclusions:

This study found that LTBI programmes in SE England are in line with national expectations and other LTBI programmes in England. The study recognises the achievements and good practice of the LTBI teams in SE England and identifies key barriers to improve the service for the future.

Key messages:

- Data collection and management is the biggest challenges of the LTBI programmes in SE England.
- The LTBI programmes in SE England are in line with national expectations.

Prevalence survey of healthcare associated infections in a large teaching hospital

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Background:

Healthcare Associated Infection (HAI) is the most frequent adverse event in healthcare settings. It is associated with an increased mortality and antimicrobial resistance, prolonged hospital stays and consistent financial loss for the healthcare systems. The objective of this study was to estimate the burden of HAIs and antimicrobial use in the Teaching Hospital Policlinico Umberto I (THPUI) of Rome to identify the most critical areas for interventions.

Methods:

Data were collected according to the most recent ECDC Point Prevalence Survey protocol in November 2018. Descriptive statistics for all variables were calculated. Univariate analysis was used to assess possible associations between variables and HAIs. Variables with a significance level of $p < 0.25$ were included in a multiple logistic regression model.

Results:

A total of 799 patients were included in the analysis; of these, 13.3% presented at least one HAI. Bloodstream infection was the most common, accounting for 30.9% of the total infections. Globally, 125 microorganisms were isolated, with Enterobacteriaceae being the most frequent (32%). At the time of the survey, 49.1% patients were receiving antimicrobial therapy. The multivariate analysis showed a significant association between HAI and use of medical devices (OR = 34.30,IC95%:3.69-318.66), length of stay (OR = 1.01, IC95%:1.00-1.02) and the exposure to prophylactic antimicrobial therapy (OR = 0.23, IC95%:0.11 -0.47).

Conclusions:

Our HAI prevalence was higher than the European standard (6.7%). This highlights the need of implementing targeted measures to prevent and control HAIs and a continuous monitoring to evaluate the effectiveness of such interventions. Another step could be the elaboration of a survey to investigate the knowledge, attitudes and practices of healthcare workers towards HAIs in order to raise awareness, enhance surveillance strategies and promote educational interventions.

Key messages:

- It was important to quantify the burden of HAIs in the THPUI in order to identify the main areas for interventions.
- Several activities will be implemented to contain this problem.

Knowledge of Romanian young women regarding HPV and cervical cancer

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Romania has the highest prevalence of cervical cancer in Europe. Cervical cancer is ranked the fourth deadliest cancer and the first among women aged between 15-44 years. In Romania, this type of cancer has 4443 new cases annually and is responsible for 1909 deaths. Lack of sexual education was linked to the increased prevalence rates of cervical cancer. Romania has a two-fold incidence rate than Finland, Luxembourg and France, countries which have sexual education courses.

HPV is the most prevalent risk factor for cervical cancer and this disease is the third most common cancer among women and the second most common among women aged between 15-44 years.

The design of the present study is quantitative as the data was gathered through an online questionnaire. The target group was selected through some pre-established parameters based on the previous searches on Facebook and Google like age, sex, HPV, vaccine, immunization, cervix, cervical cancer. The sample was represented by all the women that reach the parameters aged between 18- 24 years. The results show the knowledge on HPV, HPV vaccination and cervical cancer to be good as for all the questions more than half of the sample had an adequate understanding. In contrast, the overall tendency of the sample was for most of them to be aware of the existence of the mentioned diseases, of the testing process and vaccine existence, but then to lose their expertise when having to give details on the concepts reminded. This trend was noticed in all section as the first questions assessed their awareness of the HPV, cervical cancer, Pap- smear and vaccination, while the following needed a more comprehensive knowledge (i.e. 94.5% of the sample heard of Pap-smear while only 58.7% what it is).

The results have highlighted the gap in the knowledge of Romanian women and the need of campaigns and policies targeting this area. This study can form a basis for the development of such programs as it emphasizes the underdeveloped areas.

Key messages:

- Presenting a snapshot of the knowledge of young adult women on HPV and cervical cancer.
- Putting the groundwork for future studies and policies.

Analysis of risk factors for occupationally acquired HBV, HCV, HIV infections in Polish paramedics

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Background:

Paramedics constitute a group of professionals constantly exposed to potentially infectious biological material through close contacts with patients, possibly resulting in occupationally acquired infections.

Objectives:

To assess the prevalence and to analyze selected risk factors for occupationally acquired HBV, HCV and HIV infections among Polish paramedics.

Methods:

Between December 2018-April 2019 a cross-sectional serosurvey was conducted in 6 randomly selected ambulance stations in the West Pomeranian region of Poland with the use of an anonymous questionnaire. Serum samples were assessed for anti-HBc total, anti-HCV, anti-HIV with the use of 3rd-generation testing methods.

Results:

Response rate was 83%; 141 participants (82% males, median age 33 years, median length of practice 11.9 years) agreed to participate. Anti-HBc were found in 7% participants, none of infected individuals was aware of an infection; no anti-HCV/anti-HIV positive paramedics were recognized. Risk factors for occupationally acquired infections were as follows: 5.1% paramedics were not vaccinated against HBV, 18.3% sustained $\geq$ 1 sharps injury in the preceding year (44.4% of incidents were not reported), 95.6% irregularly used masks/goggles, 6.2% used gloves irregularly (the lack of availability was the most commonly stated reason), 5.1% had never participated in infection control training, 61.6 % did not use safety engineered devices at work, 52.2% reported recapping a needle in the last 12 months. The risk of a single exposure to HBV was correctly defined by 40.2 % of participants, to HCV - by 33.0%, to HIV - by 28.3%.

Conclusions:

Most risk factors for occupationally acquired blood-borne infections among Polish paramedics are modifiable. Unsatisfactory knowledge about the occupational exposure risks and poor compliance with infection-control procedures call for better risk recognition and assessment to reduce HBV, HCV and HIV infections in this group of health professionals.

Key messages:

- Paramedics showed detectable markers of HBV infection; individuals with not recognized occupationally acquired infection could be a source of infection for patients.
- Existing policies should be reinforced, and better surveillance for occupational risks should be instituted to minimize occupational blood borne infections among paramedics.

Strategies to achieve HPV-related disease control in Italy: results from an integrative approach

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Background:

Vaccination against Human Papilloma Virus (HPV) might allow controlling HPV-related diseases but coverage in Italy is far from the optimal goal. This project aimed at identifying strategies to promote HPV vaccination in Italy.

Methods:

an integrative approach including a systematic review and a two-step panel consultation was used to identify strategies for improving coverage among adolescents who are already target of the national campaign and promote vaccination in further targets. The systematic review followed PRISMA recommendations and the panel consultation relied on the administration of questionnaires in the first step and on a televoting system during a consensus conference in the second one. Ten experts were involved belonging to Gynecology, Public Health, General Practice, Pediatrics and Consumers. Recommendations relied on a set of criteria drawn from the Evidence to Decision framework.

Results:

The systematic review led the identification of three main strategies to improve coverage respectively based on reminds, education and multicomponent approaches. Following the evaluation of selected criteria, namely relevance of benefits, evidence strength, feasibility, equity, acceptability and costs, a strong recommendation was formulated on the use of reminds tailored to vaccine recipients or their parents whereas a moderate one was developed on the use of reminds directed to health professionals. A moderate recommendation was released on the implementation of multicomponent interventions. The panel consultation also supported the elaboration of a strong recommendation on the promotion of vaccination among women treated for HPV-related diseases, fertile women not yet vaccinated and 25 years old women. Catch-up initiatives, in particular among women and men 18 years old, were also identified as strongly recommendable.

Conclusions:

This project led to identify several valuable strategies to strengthen HPV vaccination at national level.

Key messages:

- Using reminds tailored to vaccine recipients or their parents is strongly recommended while using reminds directed to health professionals and multicomponent interventions are moderately recommended.
- It is strongly recommended to promote HPV vaccination among women treated for HPV-related diseases, fertile women not yet vaccinated and 25 years old women.

How to reach high behavioral riskgroups for HBV-vaccination: combining offline and online strategies

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Issue:

Since 2002, the Netherlands started a hepatitis B-vaccination program targeted at high behavioral risk groups in absence of a universal vaccination policy (implemented from 2011 onwards). The Public Health Services (PHS) offer free HBV-vaccination to sexworkers (SW) and men who have sex with men (MSM). In order to increase vaccination coverage and adherence a combination of offline and online strategies was used.

Description:

In 2002 the HBV-program started to reach risk groups by offline outreach activities like visiting sauna's, brothels, festivals etc. In addition targeted campaigns were developed: posters and incentives were used at outreach locations. Gradually, reaching the riskgroups at location became less effective and more costly, therefore online outreach became more important: targeted campaigns are conducted via social media, online dating platforms and commercial sex websites. These campaigns refer to websites with sexual health information, tailored advice and an online module to schedule vaccination appointments.

Results:

In 16 years' time, the program reached over 62,000 MSM and 23,000 SW with a combination of offline and online strategies. Nowadays, PHS nurses organize each year around 70-80 regional (online and offline) outreach actions for MSM and around 30-35 for SW. in 2017-2018 9-13% of the first vaccinations among MSM and SW was facilitated by the online appointment module. In addition, each year PHS are motivated to develop innovative plans in order to increase vaccination coverage such as informative meetings for MSM migrants with a festive touch, and in-depth research in how to reach male and female SW at home.

Lessons:

Combining targeted online and offline strategies in order to reach the risk groups for vaccination has been successful over the past 16 years. Each year about 4,000 MSM and 1,000 SW receive their first HBV-vaccination thanks to constant commitment and creativity of enthusiastic health professionals for new approaches.

Key messages:

- Combining targeted online and offline strategies in order to reach the risk groups for vaccination has been successful.
- Encouraging innovative plans is succesful in reaching high behavioral risk groups for vaccinations.

Surveillance of healthcare-associated infections in a Tunisian university hospital

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Introduction:

Healthcare -associated infections has become a worldwide public health problem. The aim of this study was to estimate the incidence of healthcare- associated infections in a university hospital of Tunisia.

Methods:

This was a cohort study conducted in six intensive care units in a university hospital of Tunisia during three months (from august to October 2018). Data was provided from patients' files. Data entry and analysis was done using SPSS version 22. Multivariate analysis was used in order to identify independent risk factors for healthcare associated infection.

Results:

A total of 202 patients were enrolled in this study. The incidence rate of healthcare-associated infections was 53,96%(109/202). The ratio infection/infected was estimated to 1.65(109/66).

The incidence of multi-drug resistant pathogens was 21,28% (43/202). The most common resistant pathogens included pseudomonas aeruginosa resistant to cefdazidime in 13,76%(15/109) followed by those resistant to extended spectrum cephalosporin 11.92% (13/109), followed by carbapenem-resistant acinetobcater baumanii 6,42%(7/109) then by carbapenem resistant pathogens and enterococcus resistant to vancomycin 2.75%(3/109) and finally staphylococcus aureus resistant to methicillin 2.1%(2/1.83). The multivariate analysis showed that long duration of central line catheterisation (RR = 7.44; 95%CI[2.79-19.82]), tracheotomy(RR = 8.61;95%CI[2.09-35,39]) and length of stay (RR = 1.08; 95%CI[1.04-1.13]) were found as independent risk factors for healthcare -associated infection.

Conclusions:

The emergence of mutli-drug resistant pathogens needs to be deeply studied and effective measures have to be taken in order to detect and prevent transmission of resistant strains and/or their resistance determinants, especially those with phenotypes having the fewest viable treatment options.

Key messages:

- The incidence of healthcare associated infection in the intensive care unit was high.

- Effective measures have to be taken in the intensive care unit to detect and prevent transmission of resistant pathogens.

Community engagement in public health emergency preparedness

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Background:

Communities that could be affected by infectious disease outbreaks are increasingly recognised as resources that may be effectively utilized by the authorities during public health emergencies.

Methods:

This case study project, aiming to identify synergies between communities and authorities, was based on qualitative sources of evidence, including document and media review, stakeholder mapping, interviews and FGDs (N = 137). Four countries were selected for inclusion: Spain and the Netherlands on the basis of emerging tick-born disease incidents; Iceland and Ireland on the basis of acute gastroenteritis outbreaks.

Results:

In the Netherlands and Spain strong synergies were identified in tick surveillance activities, and the value of pre-existing networks of interest groups for preparedness and response activities was recognised. The Icelandic norovirus event was unexpected and fast-moving, while VTEC in Ireland is a familiar and slower-burning challenge. As a relatively common disease in Ireland, VTEC-protocols are closely followed, while a generic all-hazards approach was taken in Iceland. There was considerable community support in the responses in both countries., and in Iceland community representatives also actively participated in producing institutional post-event evaluations.

Conclusions:

An over-riding principle emerging from this study is that an informed, at-risk community understands the challenges to adopting effective preventive practices for themselves better than anyone. Additional good practices included the utilisation of pre-existing stakeholder networks for information dissemination; and of monitoring community perceptions of any public health incident, including through social media, in order to identify and manage misperceptions. Efforts to build on the community engagement activities that are already in place in the four countries could contribute to better preparedness planning and more efficient and timely responses in future outbreaks.

Key messages:

- Recognise the community as a real partner in outbreak preparedness, response, and recovery.
- Optimise communications with communities who may be affected by outbreaks.

Incidence study of surgical site infections in a large University Hospital in Rome, first results

Doriana Vallone

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Background:

Surgical Site Infections (SSI) represent about a quarter of healthcare associated infections (HAI), increase the risk of mortality and hospital stay and extend healthcare costs. The aim of this work is to evaluate the incidence of SSI in patients undergoing surgical procedures of Hospital Units in the Fondazione Policlinico A. Gemelli IRCCS (FPG).

Methods:

This descriptive observational monocentric study has a 30-months duration: the first phase was conducted between July 2018 and March 2019. Patients undergoing abdominal surgery procedures were enrolled. Active infection surveillance was performed, according to the ECDC, during the hospital stay and the surgical outpatient visits. We also performed a post-discharge surveillance (PDS) at 30 days (or 90 days if an implant has been inserted), through a telephone interview, made by a medical doctor resident in Public Health.

Results:

During the first phase were enrolled 431 procedures in 2 Hospital Units, about emergency and hepatobiliary surgery. There were 53 cases of surgical site infection (SSI) highlighted in these procedures. Therefore, SSI's were reported in 12.09% of the procedures. In particular, in 6.28% of cases, SSIs were diagnosed during the hospital stay. The results of this study showed statistically significant differences ($p < 0.005$) in incidence rate of emergency (10,70%) and hepatobiliary tract (13,17%) procedures. The average hospital stay was significant higher ($p < 0.001$) in patients who developed an SSI (17.27 days) than in patients without SSI (4.89 days).

Conclusions:

These preliminary results show that the incidence rate of SSI for gastrointestinal procedures is similar to other European Countries (9.6%). The Hospital Health Management of FPG take care to the surveillance of hospital infections and monitor the correct application of the procedures, in line with the standards defined by Joint Commission International for guarantee high level in patients' care.

Key messages:

- Performing a survey to measure the incidence of surgical site infections for surgery procedures is very important to define it and to improve surveillance systems of hospital infections in FPG.
- Active surveillance of surgical site infections may allow to enhance appropriate preventive measures.

Influenza vaccination campaigns targeted at healthcare workers:results of four hospitals in Rome

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Background:

Seasonal influenza vaccination (SIV) of health care workers (HCWs) is well recognized as a public health measure that can protect both HCWs from infection and patients from the risk of influenza complications. Nevertheless, vaccination coverage rates among this specific population result generally lower than the recommended target. With our study, we aimed to describe the activities and the outcomes of four different SIV campaigns targeted at HCWs and organized during the season 2018/2019 in four hospitals in Rome.

Methods:

A cross-sectional study involving four teaching hospitals was performed. The collected data were synthetized into a set of descriptors and indicators, validated through a previous study that had involved the same Centers.

Results:

The Medical Directorates, in collaboration with the University Hygiene and Public Health Units of the four hospitals organized different strategies: Hospital 1, 3 and 4 realized educational courses for HCWs and actively promoted the campaigns through e-mail invitations to all HCWs. As for the access to vaccination, all the hospitals provided a dedicated unit for SIV; Hospital 1 and Hospital 4 organized also on-site vaccination sessions in the hospital wards, that required a large number of staff. The vaccination coverage rates resulted: 22.37% in Hospital 1, 18.10% in Hospital 4, 9.28% in Hospital 2 and 8,51% in Hospital 3.

Conclusions:

Our results demonstrate that multi-activity campaigns, involving education, promotion and easy access to vaccination constitute an effective approach to reinforce the value of SIV. Our findings suggest that on-site vaccination may play a key role in determining a higher vaccination coverage.

Key messages:

- Multi-activity vaccination campaigns, involving education, promotion and easy access to vaccination constitute an effective approach to reinforce the value of seasonal influenza vaccination for HCWs.
- On-site vaccination may play a key role in determining a higher vaccination coverage.

The Knowledge on antibiotics and antimicrobial resistance among Polish medical students

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Background:

Antimicrobial resistance (AMR) is one of the biggest threats to public health worldwide, compromising ability to treat infections. Medical students as a future doctors will have an important role to play in preventing the spread of antibiotic resistance. The aim of this study was to analyse the knowledge and attitudes of Polish medical students towards antibiotics and AMR.

Methods:

A questionnaire containing 24 questions, on medical students' knowledge, attitudes and perceptions of antibiotic prescribing and antibiotic resistance was developed. The survey was conducted in May-June 2018 among medical students of Medical University of Warsaw at various years of their studies.

Results:

The study group consisted of 291 students (70% women, 30% men). Forty six of the students had used antibiotics within the previous 12 months. The prevailing reasons for taking an antibiotic were: pharyngitis (25%), bronchitis (12,8%), sore throat (12%), cough (8.3%), pneumonia (7.9%), urinary tract infection (7.6%), cold (6.6%). Ninety-two percent of the respondents considered AMR to be a significant problem, and 7.9% stated it will become in the future. Four percent of respondents believed that antibiotics are effective in treating common cold. The majority of students (83.5%) expressed the opinion that doctors often prescribe an antibiotic without need. Most respondents think that too frequent prescription and low awareness of the consequences of their overuse have an impact on the rise and spread of antibiotic resistant bacteria. The vast majority of respondents (80%) declared that university studies enabled the gaining of a wider knowledge about the use of antibiotics. The vast majority of respondents (92.4%) indicated a willingness to extend their knowledge on antibiotic use.

Conclusions:

Medical students are aware that AMR is a growing problem resulting in diminishing treatment options. The results of the study should be taken into future education programs.

Key messages:

- Medical students have a good understanding of the health risk of AMR but consider antibiotics for viral infections.
- More training on rationale antibiotic use included in the curriculum is warranted.

MenACWY vaccination decisions in the Netherlands: the role of risk perceptions

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Background:

The Netherlands experiences an unprecedented increase in meningococcal W infections. A national catch-up menACWY vaccination campaign started in October 2018, covering birth cohorts 2001-2005. To understand menACWY vaccination decisions, our study reports on perceptions of risks and their influence on menACWY vaccination intentions during an ongoing outbreak of meningococcal infections.

Methods:

Online surveys were administered in September 2018 among adolescents (AD) targeted for menACWY vaccination (N = 3036) and parents (PA) of these adolescents (N = 3002). Following a mental models approach, survey items addressed knowledge and beliefs of meningococcal disease, the menACWY vaccination and vaccinations in general, and menACWY vaccination intention. Random Forest Analyses were conducted to identify those knowledge and beliefs that strongest predict vaccination intention.

Results:

The response was 52.8% (N = 1603) in AD and 57.1% (N = 1784) in PA. 71% Of AD and 83% of PA indicated a positive vaccination intention. Most respondents perceived meningococcal disease as a severe disease with possible deathly consequences and were aware of transmission routes. Some misbeliefs of vaccines were rather strongly represented, with respectively 35% of AD and 45% of PA thinking that each year a number of children dies due to vaccination side effects. Preliminary results indicate that perceptions of vaccines in general, especially concerning the need for and the effectiveness, were the strongest predictors of vaccination intention in both AD and PA.

Conclusions:

Adolescents and their parents seemed well informed about meningococcal disease, but less about vaccinations. The belief that vaccines are needed and effective in preventing infectious diseases seems to be of more importance in vaccination decisions than other beliefs of disease and vaccination. Future communications need to address the identified misbeliefs and emphasize the need for and effectiveness of vaccines.

Key messages:

- MenACWY vaccination intentions are more dependent on beliefs about vaccines in general than on beliefs about meningococcal disease and the menACWY vaccination.
- The belief that vaccines are needed and effective in preventing infectious diseases is of major importance in menACWY vaccination decisions.

A systematic review of email-based reminder interventions to increase vaccine uptake

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Introduction:

Reminder and recall interventions have been proven to be effective in increasing vaccination coverage. Emails are a popular mean of communication, and their use as a reminder method has many potential benefits: low costs, timely delivery and no restriction of content. Nevertheless, there is limited evidence that compares the advantages of using emails for vaccination reminders to other methods, on which extensive literature is already present.

Methods:

We conducted a systematic review following the PRISMA guidelines to analyze evidence from peer-reviewed studies on the application of email-based interventions to immunization programs. We included any measure of vaccine uptake or immunization coverage, in any target population and settings.

Results:

We included 11 studies in the final analysis, of which 9 were RCTs, 1 was a controlled trial and 1 a before and after study. Most studies were conducted in the US. Six studies had data on the uptake of influenza vaccination, three on HPV series completion, 1 on PPSV23, and 1 on vaccines recommended for adolescents. In 4 studies email reminders proved to be more effective in increasing vaccination uptake than no reminders. Five studies didn't show advantages of using email reminders when compared to traditional methods (phone call, mail, paper card) and digital reminders (SMS, automated phone calls). In 1 study a significantly higher increase in uptake was achieved when combining emails with Interactive Voice Response phone calls. Finally, 2 studies compared different email models.

Conclusions:

In conclusion, this review outlined that not enough evidence is available regarding the use of email reminders to increase vaccination uptake. Our findings suggest that the choice of reminder method should depend on the population, and future studies should analyze its cost-effectiveness and convenience in respect to other methods, and aim at improving the content of emails to increase their efficacy as a reminder method.

Key messages:

- Based on our review of available studies, not enough evidence is available to prove the efficacy of email reminders to increase vaccine uptake.
- Additional evidence is needed to analyze cost-effectiveness of email reminders, convenience in respect to other methods, and to improve their content to increase their efficacy as a reminder method.

Information sources and attitudes of Polish migrants accepting or declining vaccination in Scotland

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Background:

Poland has the lowest EU vaccine confidence scores. The Polish are the largest migrant group in Scotland (91,000) with a high decline rate of nasal influenza vaccination. A new Polish language information leaflet in the 2018 school influenza programme saw consent form return increase but uptake remained low. We compare vaccination attitudes of accepting and declining parents.

Methods:

A questionnaire to 365 Polish parents after vaccination asked about the leaflet, vaccination, time in UK and included WHO Vaccine Hesitancy statements. Accepting and declining parents were compared.

Results:

128 (37%) responded - 42% of vaccinating and 39% declining parents. 90% were long term UK resident, 72% speak Polish at home. Previous experience had most influence in vaccination decision-making, with social media and personal contacts in Poland and Scotland also key. Decliners were more likely to cite social media than accepters. Concerns about new vaccines, side effects and 'currently uncommon conditions' are high in the Polish community and decliners hold more negative and scientifically 'incorrect' opinions. Parents know that Polish and UK immunisation schedules differ for influenza, a condition thought less serious in Poland than UK.

Conclusions:

Polish norms strongly influence this migrant group. Differences in how Polish migrants who accept or decline the vaccination respond to vaccine hesitancy statements plus knowing that Polish media and the Polish community shape their views can be used by health authorities to target health messages. It is important to be aware of immunisation status and vaccination beliefs of mobile migrant groups, such as the Polish, to prevent spread of vaccine preventable diseases in Europe. Linking vaccine hesitancy statement responses and behaviour can highlight national characteristics and particular concerns of vaccine hesitant parents. This information could be used to improve vaccine uptake rates among different ethnic minorities.

Key messages:

- Polish migrant children have low nasal influenza vaccine uptake. Vaccine hesitancy statements show decliners are particularly likely to distrust new vaccines and worry about vaccine side effects.
- Migrants access Polish social media and information and retain vaccination beliefs and norms post migration. Knowing this allows targeting of information campaigns to increase uptake.

Legionella control in a tertiary care hospital in Italy: adapting solutions to changing scenarios

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Background:

Legionella contamination of hospital water distribution system still remains a critical issue in healthcare settings, despite the disputed relationship between environmental legionella and hospital-acquired legionellosis. We report the experience of our 1200-beds hospital, where a new water safety plan (WSP) has been applied since 2017, and the results obtained with the application of different methods to control Legionella water contamination, especially in critical areas.

Methods:

Policlinico San Martino is the referral tertiary acute-care university hospital in Liguria region, North-West Italy. It's made of 21 buildings of different dimensions, 7 of which host high risk patients, according to Italian Guidelines for legionellosis prevention and control. A sampling plan for Legionella detection was implemented in 2017, focusing on the water network critical points. Different secondary disinfection procedures were used, including systemic (chlorine dioxide, monochloramine), focal (point-of-use filtration) and short-term methods (hyperchlorination), the last in case of contamination higher than 10○4 CFU/l.

Results:

Respectively, during 2017 and 2018 a total of 201 and 119 hot water samples were collected, distributed among the 7 critical buildings of the hospital. Negative samples raised from 69.7% to 74.8%, while positive samples >10○3 CFU/l (recommended cut-off for acute disinfection according to Italian guidelines) lowered from 21.9% to 9.2% of total samples. Out of 55 positive samples, Legionella sg 3 accounted for 98.2% of the total.

Conclusions:

The new WSP determined a significant reduction of Legionella contamination of water distribution networks in our hospital critical buildings. The continuous surveillance of critical water system points provided evidence to elaborate an effective protocol for routine and extraordinary disinfection interventions, as result of a close collaboration between hospital hygiene unit and engineering and technical services.

Key messages:

- The implementation of an effective water safety plan and different disinfection procedures in hospital critical areas allow us to reduce and control the risk of hospital-acquired Legionella infection.
- Continuous surveillance cultures of drinking water to detect Legionella are necessary to adapt disinfection methods to local results.

RSV burden among hospitalized patients: 6-years surveillance of Liguria regional reference lab

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Background:

Respiratory syncytial virus (RSV) represents one of the most common agent causing respiratory infections in infants and adults. It causes seasonal epidemics, with a peak prevalence in winter. RSV epidemiology and burden are still under-recognized, although it leads to complications and increased mortality in patients at risk, such as infants, pregnant women, the elderly and patients with chronic diseases.

Materials/Methods:

Data analyzed in this study were collected during the virological surveillance system activities at the Policlinico San Martino university hospital in Genoa, Italy. The regional reference laboratory receive swabs from all Liguria region, and detects the main circulating respiratory viruses by using molecular methods. The proportion rate of RSV (subtypes A and B) positive samples was determined in the period January 2013 - December 2018, stratifying data by gender, age and hospital units.

Results:

From January 2013 to December 2018, 14911 swabs were analyzed, 585 patients reported at least once RSV positive respiratory sample. The median age of RSV positive patients was 56 years (IQR 27-71), with a males: females ratio of 0.93: 1. The peak RSV infection period occurred mainly during first quarter, confirming the seasonal trend of the virus. Greatest proportion of RSV positive samples were received from hematology-oncology wards (45.2% of isolations) and medicine units (31.9%). From 2013 to 2018 an increase of swabs collection of 207% was observed. Neonatology and pediatrics resulted in the highest rate of positive swabs (above 30%), hemato-oncology departments collected 7932 swabs with 3,3 % resulted positive.

Conclusions:

A virological surveillance system able to detect the principal respiratory viruses circulating in adult population is a key element to better understand the RSV epidemiology and evaluate therapeutical strategies, in view of the availability of effective vaccines able to prevent RSV infection in the next future.

Key messages:

- RSV represents a leading cause of respiratory disease in hospitalized patients, especially in hematology-oncology, medicine and intensive care unit wards.
- Virological surveillance is a key element to better understand RSV epidemiology in all ages, in view of the availability of new effective vaccines.

Perioperative antibiotic prophylaxis: tools, results and reflections from a 6-year monitoring

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Background:

Perioperative antimicrobial prophylaxis is a key practice to prevent surgical site infection. The Udine Healthcare and University Integrated Trust has defined its features in a specific procedure, available on the hospital Intranet. Compliance with the procedure has been monitored on a semi-annual basis.

Methods:

Between July 2013 and December 2018 15 clinical records per semester for each one of the 16 surgical units were randomly extracted, including ordinary admissions with clean or clean/contaminated surgery. Compliance with the procedure was monitored for all the items considered: drug, dosage, timing of administration, redosing and duration of prophylaxis. A first comparison analysis both between semesters and for longer time frames was performed with the chi-square test; to evaluate the presence of a linear trend all over time (in semestres), the Pearson linear correlation coefficient was calculated; in case of correlation, a simple two-variable linear regression analysis was performed. Statistical significance was assessed for $p < 0.05$.

Results:

A sample of 2775 records was evaluated. Focusing on the first and last semester of monitoring, overall compliance increased in 9 of the 16 units, although there is a drop, when extending the analysis to the whole sample (72% vs 70.8%) with no statistical significance. Otherwise a statistically significant difference is recorded between the first and the last two years of analysis ($p < 0.007$), with an increase of overall compliance from 64.2% (2013-2014) to 69.7% (2017-2018). Finally a strong and significant negative correlation between time and overall compliance to redosing emerges ($r = -0.79$; $p = 0.004$).

Conclusions:

Compliance with hospital procedure has substantially improved over time reaching a stable performance value. However the linear regression analysis highlights the need to implement new intervention strategies in order to increase overall compliance to redosing.

Key messages:

- Overall compliance with hospital procedure has improved over time.
- Results highlight the need to implement new intervention strategies.

Prevalence of measles IgG antibodies among immigrant workers in South Korea

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Background:

After the national vaccination for measles was introduced in 1985, the measles has been controlled in South Korea despite the epidemic in 2000-2001. Current cases in Korea were assumed to be transmitted from outside the country. Because the dynamics and social changes of the population has emerged as important factors in the measles epidemic, this study aimed to assess the prevalence of measles IgG antibodies among immigrant workers.

Methods:

The cross sectional seroprevalence survey was conducted in Gyeongsangnamdo province, Korea. Because the representative sampling frame could not be possible, the voluntary foreign workers who have agreed informed consents with a translated format into the native language, participated in this study. IgG antibodies of measles was examined by ELISA using the automation equipment (BEP III- ELISA). This study obtained the approval of Dong-A University Clinical Research Ethics Review Committee.

Results:

364 people of foreign workers participated in the study. Regional distribution for study participants was composed of 30 people in Vietnam (16.5%), Uzbekistan 71 people (19.5%), Thailand 70 people (19.2%), China 60 people (16.5%), Philippines 36 people (9.9%), and Indonesia 32 people (8.8%). The average age was 33.0 ± 6.9 years old and 86.5% of the total was men. High school or higher education accounted for 74%. 93.7% showed positivity (95% CI: 95.7-98.9%) for measles IgG antibody and 3.6% showed equivocal.

Conclusions:

The measles seropositivity among immigrant workers in Korea was considered to be at the recommended level.

Key messages:

- The measles seropositivity among immigrant workers in Korea was considered to be at the recommended level.
- International cooperation is needed to prevent global measles epidemic.

Determinants of influenza vaccination uptake among Polish school teachers

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Background:

School settings place teachers at risk for influenza infection. Polish National Immunization Program recommends influenza vaccination (IV) for this occupational group. The study objective was to assess teachers' knowledge and attitudes regarding IV, to determine 2018/2019 uptake and factors influencing the IV receipt; this has never been performed before in Central/Eastern Europe.

Methods:

Between March-April 2019 teachers from 5 randomly selected primary schools (2 urban, 3 suburban) in West Pomerania, Poland, were surveyed with the use of the self-administered, anonymous questionnaire.

Results:

Response rate was 50.1%. Among 102 respondents (68.6% females, mean age 45.7 years, mean length of practice 20.3 years), 31.4% were chronically ill. Only 4.9% reported getting the 2018/2019 IV, 8.8% were willing to be vaccinated in the next season. Of the respondents getting the 2018/2019 IV, only one also re-ported getting the 2017/2018 vaccine. The most common source of information about the IV were: family doctor (55.9%) and TV (68.6%). Beliefs that the IV was not effective (40.2%%) and concerns about the side effects (19.6%) were the most common reasons for not getting it. Only 44.1% of respondents believed teachers have heightened risk of contracting influenza. Regarding preventive methods, 83.3% teachers pointed at social distancing, 65.7% - at frequent handwash-ing, 65.7% - at vaccination; 38.2% believed that drinking tea with lemon could prevent influenza. More than a third of teachers (38.4%) thought influenza infection is always symptomatic. Older age was the only factor independently associated with IV receipt ($p < 0.05$).

Conclusions:

Influenza vaccination coverage among Polish primary school teachers is disturbingly low. Future education strategies encouraging teachers to immunize themselves against influenza should tackle misconceptions about the IV and increase awareness. Interventions related to maximizing IV uptake should focus especially on younger teachers.

Key messages:

- This preliminary study showed that influenza vaccination coverage among Polish primary school teachers urgently needs improvement.
- Teachers should better understand the importance of influenza vaccination as a significant preventive measure and realize their role in infection prevention and transmission at the school setting.

Health professionals as parents are not immune to vaccine hesitancy – an Italian national survey

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Vaccine hesitancy is a growing concern in many European countries, including Italy, as instanced by alarming results from Eurobarometer 488 dated April 2019. In the view of the current magnitude of the phenomenon, our aim was to investigate its determinants among parents, with a specific view on those working as health professional.

In 2017, parents of children aged 3-84 months were recruited online. Based on self-reported vaccine status and timeliness of vaccinations, parents were classified as pro-, hesitant, or anti-vaccine. The association between baseline characteristics and hesitancy was investigated with logistic regression adjusting for child's and parents' age, prematurity, presence of older children, previous vaccine adverse reaction in the child at issue, parents' nationality, education and employment status, health profession of at least one parent, single parenting, vegetarian lifestyle and perceived economic security.

A total of 3,865 questionnaires were collected (64% pro-, 32% hesitant, 4% anti-vaccine). Families with at least one health professional as parent were 20% of the sample.

Vegetarian lifestyle (aOR 3.0; 95%CI 2.20-4.08), unsatisfactory (aOR 1.67 95%CI 1.08-2.58) and partially satisfactory perceived economic security (aOR 1.40; 95%CI 1.09-1.78) and previous vaccine adverse reactions (aOR 1.25; 95%CI 1.05-1.48) were associated with vaccine hesitancy, while having older children resulted as a protective factor (aOR 0.82; 95%CI 0.69-0.98). No significant association was found with other abovementioned variables, including parent employed as health professional (aOR 0.99; 95%CI 0.81-1.22).

Vaccine hesitancy seems to be part of a lifestyle choice and, to a smaller extent, associated with previous vaccine adverse reactions and lower socioeconomic status. Interestingly, parents' level of education and employment in healthcare do not affect vaccine acceptance. The latter poses a challenge, given their crucial role in promoting vaccination.

Key messages:

- Hesitancy is associated with lifestyle choices, experience of adverse reactions and socioeconomic status, while education and employment as health professional seem not to be relevant.
- Whether they are health professionals or not, parents' attitude towards their child's vaccinations is the same.

Understanding the complexities of HIV risk among sexual minority men in a global context

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Background:

Complex systems theory recognizes the intricacy of health issues and inequities, which permits the study of interrelationships across multiple levels of the socioecological model. We interrogated the research to identify upstream and downstream factors, their intersections, and recursive processes to develop a visualization of HIV risk among sexual minority men.

Methods:

Using global HIV literature drawn from diverse disciplines and geographies, we elucidated HIV risk factors through a complex systems theory approach. We used thematic analysis to categorize HIV risk factors into different levels of the socioecological model, such as policies, community risk factors, individual behaviors, etc. We also identified the relationships between these risk factors to assess how they shaped HIV risk. The analyses were used to inform the connections between the various factors that lead to HIV risk in order to develop a visualization of the complex system, for which Stella Architecture was used.

Results:

The thematic analysis of the literature and complex systems visualization portrays that HIV risk arises from a complex interplay of recursive and reinforcing factors ranging from policies, community factors, healthcare systems, and interpersonal relationships leading to manipulations in individual-level behaviors that put sexual minority men at risk for HIV. This visual representation indicates that HIV risk cannot simply be thought of as an individual-level factor nor simply related to sexual behaviors. Rather, HIV risk arises from upstream societal forces such as stigma, poor mental health, and health systems that relate to a multitude of downstream factors that socially pattern sexual minority men's HIV risk.

Conclusions:

The risk of HIV among sexual minority men stems from numerous intersecting factors across multiple levels of the socioecological model indicating the need to improve structural- and community-oriented approaches to address HIV.

Key messages:

- HIV risk arises from multiple social determinants.
- HIV preventions need to encompass multi-level interventions to fully address HIV risk.

Influenza vaccination: a multi-modal approach to increase compliance in an italian teaching hospital

Francesca Malacarne

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Issue:

Influenza vaccination of Healthcare workers (HCW) has a key role in avoiding flu transmission among patients and HCWs and is annually recommended by health authorities. Despite the 75% target identified by WHO, coverage is still inadequate in many European countries.

Description of the problem:

The Infection Control Team and Public Health Residents of a University Hospital annually cooperate to actively offer flu shots directly in the Units, but in 2017-18 campaign only 12,1% of HCWs took advantage of the service. From July to December 2018 a composite intervention was performed to increase immunization rates. In each Unit a medical doctor and a nurse (midwife for the Obstetrics unit) were identified as Link Professionals (LPs).Two educational meetings with Infectious Diseases and Public Health experts were organized for LPs to deal with their hesitancies and to engage them for the vaccination promotion among colleagues.The calendar (2/week ambulatory + 16 in-ward appointments), tailored to maximise the HCW accessibility, was sent to medical consultants and head of departments, to all physicians, and to head nurses for dissemination. Promotional posters and videos were displayed across the hospital.

Results:

Educational meetings were attended by 130 LPs. A total of 772/3420 HCW took advantage of the 2018-19 active campaign (22,6%), with a significant increase from the previous year (+10,4%; 95%CI 8,7-12,2; $p < 0{,}001$). The immunization rates raised in all HCWs categories: 279/660 doctors (it was 167/660 in 2017-18; +17.0%; 95%CI 11,9-21.9; $p < 0{,}001$); 303/1615 nurses (150/1615 in 2017-18; +9.5%; 95%CI 7.1-11-9; $p < 0{,}001$); 13/43 midwives (2/43 in 2017-18; +25,6%; 95%CI 9.7-40.8; $p = 0{,}002$).

Lessons:

Despite the significant increase,further efforts are necessary to reach the WHO target rate. All HCWs categories were positively affected by the multi-modal intervention. LPs seem to play an important role in promoting vaccination among colleagues, in a peer-to-peer trust relationship.

Key messages:

- Influenza vaccination rates needs to be increased in healthcare workers for their protection and for patient safety.
- A well-structured multi-modal intervention programme involving prepared HCW promoters into wards is essential to increase compliance.

Vaccination, Autonomy, Complexity, Solidarity - Ethical analyses of a German policy discourse

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Background:

Currently, measles immunization is high on the agenda of academic and public discourses - on both sides of the Atlantic. In Germany, the discussion of mandatory (measles) immunization was intensively publicly discussed in Spring 2019. Many stakeholders, including federal politicians, plea for mandatory measles immunization. In our paper we analyse the discourse from an ethical point of view.

Methods:

Statements and arguments from German stakeholders in the public debate in 2019 are analysed (among them statements of the federal minister of health, the German Medical Association, NGOs and the National Ethics Council). A vaccination ethics framework and a public trust framework are applied in the analysis.

Results:

Politicians and other public stakeholders debate (measles) immunization and increasingly demand mandatory (measles) vaccination. However, frequently it is unclear which vaccinations or immunization programmes they refer to. They often do ignore the epidemiological situation of immunization rates in Germany, regional differences, relevant target groups and implementation mechanisms, including potential sanctions. This way they simplify the complex problem and offer (populist) simplistic solutions. Normative arguments of stakeholders repeatedly use conceptions of 'autonomy' and 'harm'; but sometimes also 'solidarity' is mentioned.

Conclusions:

The call for mandatory measles immunization of school and kindergarten children is offering no adequate and sufficient solution to the problem of elimination of measles. Nevertheless, it contributes to reducing infection risks for the children in care and schooling facilities. Rather, the problem has to be understood in its complexity before discussing the ethical challenges and making effective policy recommendations. When discussing ways to increase immunization rates, ethical values like public trust and solidarity have to be in the foreground - not (only) the debate of autonomy and its restriction.

Key messages:

- In German policy discourses 2019, the discussion of "mandatory (measles) vaccination" often shows inaccuracies regarding definitions and facts. These have to be clarified before ethical analysis.
- Ethical issues regarding the voluntariness of measles vaccination relate also to the ethical concepts of solidarity and public trust and not only to autonomy.

Pediatric vaccination appointment scheduling: experience from an Italian clinic

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Issue/problem:

Since 2012 pediatric vaccination coverages in Italy have been decreasing. Negative trends have been recorded especially for hexavalent and MMR vaccines. In mid-2017 the Italian government passed an act making ten vaccines compulsory. Most recent data show the act is working, however other aspects of the process should be improved.

Description of the problem:

Parents are invited to bring their children to the clinic through letters or telephone calls. Vaccination appointments are scheduled during weekdays, either in the morning, the afternoon, or both. Each session is carried out by a physician and a nurse, with a new patient scheduled every ten minutes. Appointments and vaccinations are registered on the vaccine-specific electronic health record (SISPC).

Results:

In March 2019, the vaccination clinic worked 21 days for a total of 29 sessions. 823 appointments were available, 797 of them (96.8%) had a patient scheduled before the session started. 547 (68.6%) attended the vaccination appointment, 98.4% of them were vaccinated (538, 67.5% of the total patients scheduled). Among those who did not attend the scheduled appointment, only 108 (43.2%) agreed to reschedule. Eventually, only 58.3% of these patients attended the rescheduled appointment. No statistically significant differences among those who attended and those who did not attend the appointment were found among the variables retrieved from SISPC: day, time, vaccination planned (type, and if mandatory or not), sex, age.

Lessons:

A third of available vaccination appointments in our clinic were lost. Despite the ease through which patients can reschedule an appointment, many choose not to and left their appointments unattended. Although missing a vaccination appointment can be appropriate - e.g. when the child is sick - and great effort should be put to achieve the goal of improving coverages, policymakers should also consider provisions to discourage such behaviors for a better use of resources.

Key messages:

- A third of available vaccination appointments in our clinic were lost in a month.
- Keeping in mind the goal of improving coverages, policymakers should aim for the best possible use of resources.

A model of Carbapenemase-Producing Enterobacteriaceae spreading in the French hospitals network

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Background:

Carbapenemase-Producing Enterobacteriaceae (CPE) are spreading at an alarming rate and threaten health systems and patient safety worldwide. In France, their transmission is driven by importation of international cases and inter-regional dissemination due to patients' transfers between hospitals. This study aims at defining a mathematical model reproducing CPE transmission on the French network of hospitals.

Methods:

CPE spreading is modeled using a stochastic susceptible-colonized-infected (SCI) hospital-based model. It takes into account both CPE dissemination through patient transfers, and importations either from foreign countries or in-town transmission. The patient transfer network was reconstructed using data from the French hospital discharge database (PMSI) over the years 2014-2017. Epidemiological parameters were estimated from surveillance data of CPE episodes from August 2010 to November 2016 from the French national Healthcare-Associated Infections Early Warning and Response System.

Results:

Our epidemiological model replicates the number of CPE hospital outbreaks occurring in France on a network of 2,433 hospitals. It allows to estimate the number of unobserved hospitals' colonization and differentiate outbreaks due to foreign importation from outbreaks due to patient transfers. Finally, the model can be used to benchmark control strategies based on patient redirections, or targeted screening.

Conclusions:

This study is the first to simulate CPE spread in France using real-life patient transfers data. Our mathematical model may further help public health authorities in the definition and evaluation of new control strategies of CPE transmission based on patient flows between hospitals.

Key messages:

- The mathematical model take into account CPE spreading through hospital transfers and importations from origins using real-life data.
- Our stochastic susceptible-colonized-infected (SCI) hospital-based model reproduces CPE spread in France and further help in evaluating control strategies of CPE transmission.

Local Tuberculosis Georeference: a tool to define BCG vaccination in high-incidence area in Portugal

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Issue:

Tuberculosis (TB) incidence in Portugal is $< 20/100000$ people, with high-incidence municipalities in urban areas such as Amadora. In 2016, the national vaccination programme moved the BCG vaccine from universal to restricted risk groups. Amadora, due to the higher-incidence area, maintained a universal vaccination policy. Recently, it was hypothesized that vaccination could be applied to specific parishes even in high incidence counties.

Description:

We aimed to identify specific geographic areas with higher risk of TB to help redefine the local BCG vaccination policy. We proposed to georeference active TB cases between 2015 and 2017, in Amadora, to then assess the incidence per parish and statistical section. We also aimed at identifying geo-clusters and density of cases.

Methods:

(1) notified TB cases from 1 January of 2015 to 31 December 2017 were extracted from TB surveillance system; (2) cases of latent TB infection (LTBI), cases out of Amadora's bounds and without national ID were excluded; (3) ArcGis®Online and associated maps were used to provide populational estimates; (4) cumulative incidence was calculated per year and averaged for the 3-year period; (5) Clusters were determined using distance and simple density of cases was calculated using Kernel algorithm.

Results:

Considering the 6 parishes of Amadora, the 3-year cumulative incidence varied from 19.58 to 38.3 per 100000 hab. The highest incidence was found on the parish with the best socio-economic profile. 14 geo-clusters were mapped; 3 matched known deprived neighborhoods. Overall density was higher in these neighborhoods.

Lessons:

With this approach we found that deprived neighborhoods had higher levels of case density, but 3-year cumulative incidence was higher on the parish considered to have low occurrence of TB. As such, and due to the intense population flows in Amadora, the local public health unit recommended the persistence of BCG vaccination to all residents of the municipality.

Key messages:

- Georeferecing supported our recommendation to mantain a universal BCG vaccination policy.
- Georeferencing associated to surveillance systems is highly useful to ensure evidence based public health practices, even at the local level.

Late presentation of chronic hepatitis B virus in Spain: a country with access to therapy

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Background and aims:

Chronic infection with hepatitis B virus (HBV) can progress to liver cirrhosis and lead to complications such as decompensated liver disease, hepatocellular carcinoma and liver-related death. Antiviral agents against HBV are very effective in suppressing viremia and greatly reduce the risk of complications if treatment is initiated before the onset of advanced liver disease. The aim of this study is to assess the prevalence of late presentation in leading hospitals across Spain.

Methods:

Retrospective cohort study of patients seeking first time care with a liver specialist at six tertiary Spanish hospitals, with 2018 data. Late presentation (LP) included advanced liver disease (ALD) defined by significant fibrosis ($\geq$ F3 assessed by either APRI score > 1.5, FIB-4 > 3.2, transient elastography (FibroScan) > 9.5 kPa or biopsy $\geq$ METAVIR stage F3) with no previous antiviral treatment and late-stage liver disease (LSLD) was defined by the presence of decompensated cirrhosis and/or hepatocellular carcinoma. Prevalence of ALD and LSLD at first consultation, demographics, and associated risk factors were analysed.

Results:

203 patients chronically infected with HBV were included. Advanced liver disease was detected in 14.8% and late stage liver disease was observed in 6.1% of cases. 57.1% of the cases were male. The majority of those with HBV were non-Spanish (53.7%). The median age was 47 and the median of years from diagnosis to specialist care was 1 (IQR 7). 58.6% of patients were referred from primary care and 3.7% cases had hepatocellular carcinoma upon presentation for care.

Conclusions:

Late presentation with HBV is common in Spain, particularly for the foreign-born population, despite full access to antiviral therapy for HBV in the country. In order to rectify this health systems failure, improve outcomes and reach the viral hepatitis elimination goal adopted by WHO in 2016, strategies to reduce late presentation to care are essential.

Key messages:

- Early diagnosis of HBV is needed in order to rectify the health systems failure of late presentation to care.
- Interventions targeting foreign-born populations should be implemented to reduce late presentation to HBV care and treatment.

DQ Learning from practice

Improving the operational skills of the health personnel working in the emergency departments

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In December 2013 the European Commission approved the project promoted by CEFPAS, The Centre for Training and Research in Public Health within the programme PROGRESS, "Improving the operational skills of health personnel working in the emergency departments. A useful tool to give concrete answers to EU policies on patients' safety and to create new working opportunities".

This project aimed to combine the need to find innovative solutions in the field of healthcare with the objective of increasing the safety of patients in emergency departments, while also covering the need to promote worker mobility within the European Union. The key tool for implementing this goal is the exchange of experience and best practices.

The project partners included: the Edinburgh University of Medicine, the Napier University (again in Edinburgh), the

Dresden University of Technology, the Herlev Hospital (in Copenhagen) through the DIMS or the Danish Institute for Medical Simulation at the University of Copenhagen, as well as ISMETT and CREAM (the Research Centre of the University of Medicine) in Palermo.

Every partner, during the planning, has provided the know how developed in the area of emergency. Specifically it has been analyzed the possibility to compare and visit the simulation Centres of Edinburgh, Dresden and Palermo, and to study the use, in each country, of innovative methodology during the training of the health personnel.

The partner, during the planning of the project, studied also how to help people to find easier jobs opportunities in the health sector (so they thought to create a specific data base of the emergency departments operating in Italy, Scotland and Germany where to find a job or a chance for an internship).

The project has lasted for one year and has provided research activities and the exchange of experience and best practices.

Key messages:

- There is a huge difference regarding the way in which the emergency system is organized within single countries around Europe.
- Comparing high-level organisations we have benefited in terms of ideas, projects and potential objectives to be set in order to improve our work and to improve results for patients.

Feedback on the transition to routine use of Connexin, a tool to improve city-hospital cooperation

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Issue:

The French national health strategy ''Ma Santé 2022'' underlines the need to decompartmentalize the organization of care through city-hospital cooperation. The Connexin® platform aims, as part of treatments prescribed in hospitals and delivered in community, to identify all health professionals around the patient, and ensure they communicate and coordinate with each other to improve the coherence and relevance of care within the pathway.

Description of the problem:

A pilot phase of deployment of the tool was conducted in two regions to measure the organizational and clinical impact of its use. This evaluation was based on qualitative interviews with the various stakeholders (local pharmacists, hospital teams, institutional partners, etc.). The objective was to assess the adoption and transition phases while identifying its effects and added value for health professionals using it.

Results:

Adherence was important: many pharmacists registered, reflection on the service organization in hospital teams. Despite some access problems (codes lost, dual authentication), professionals believe Connexin® facilitates communication between primary care and hospital actors. However, transition was difficult in several hospitals (lack of support from management mainly), insufficient use by pharmacists (hampered by the new missions entrusted to them by law). Support closest to professionals in the tool implementation thus seems crucial to ensure transition to routine use.

Lessons:

Connexin® is a secure, intuitive platform adapted to health professionals' needs for cooperation. Mobilization of the various actors around the platform proves the interest for and the relevance of such a tool to optimize the efficiency of care. However, the organizational impact, no matter how small, is a barrier to the transition to routine use, a finding shared for many tools.

Key messages:

- While the platform was designed by primary, hospital and institutional health professionals, the study points out the need to set up a project governance and appropriate support during implementation.
- Any organization impact is an obstacle to the evolution of practices.

How to build the partnership between researchers and field actors?

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In health promotion, the partnership between researchers and practitioners (field actors) is necessary for multiple reasons: to build intervention research together, to share our knowledge and experience, to produce new knowledge and experience, and to improve the quality of interventions, decisions... and research.

In order to build this partnership and to achieve these goals, two dimensions were explored during several mixed workshops (researchers and field actors) organized in Brittany (France): their reciprocal perceptions, and what they can mutually bring to each other.

During the first workshop, a facilitation technique called ''the figure,'' (which health educators use when they need to underscore the perceptions of a group of professionals about a specific population) shed light on mutual misconceptions and helped rectify them. During the following workshops, both groups identified their common assets, resources, difficulties and stakes. They also highlighted what they could bring to each other.

Indeed, the relationship between researchers and field actors is usually considered in terms of the contributions of research to actions. However, field actors are more than simple ''users'' of a knowledge produced by others, they are also ''producers' of knowledge. They can contribute to define research questions, issues, hypotheses (with a social twist...); challenge the relevance and feasibility of research; promote the link and the understanding between the two separate worlds of practice and research; encourage the making of certain research protocols; facilitate experimentation; check the validity of the research projects in terms of social usefulness; make research more visible to field professionals and policy makers; and support knowledge transfer and exchange.

The ways in which the partnership between researchers and health promotion actors actually enrich both categories of professionals, are detailed in this presentation.

Key messages:

- Reciprocal representations of researchers and practitioners in the field of health promotion must be highlighted to lay the foundations of their partnership.
- In health promotion, knowledge transfer must be understood as an exchange between researchers and field actors, the latter being experts in their domain of intervention and producers of knowledge.

Show your rare, handle with care: a knowledge brokers network to handle rare disease patients

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Background:

In Rare diseases patients. difficult in diagnosis can produce inappropriate pathways of care. A correct diagnosis took almost 5 years in Europe and 7.3-7.6 y in US. The directive 2011/24/EU provides a legal regulatory asset for the European Reference Networks (ERNs). ERNs are designed to connect health care providers and centers of expertise for gaining appropriate pathways of high-quality care and to support sponsorship in order to make healthcare closer to the patients. Federico II University actually has 9 confirmed ERNs.

Methods:

We connected the patient related activities inside the ERNs and we planned a project-based network that creates harmonization of diagnostic tools and widespread diffusion of screening activity able to drive diagnostic enrichment. The Hospital Chief Office together with the Public Health Department acts as ''Knowledge brokers'' (KB) defined as connectors who may crisscross the hierarchical boundaries. We scheduled interventions into the ERNs and future improvements. Interventions areas have been represented in a conceptual map.

Results:

Brokers into the network are attended to allow better merged innovation rate and sharing data. Improvements could be directed toward: 1) sharing data and communication, 2) diagnostic enrichment 3) hospital services networking into the path. Including this model in the regional pathways may build a common platform to support appropriate care in disease-endemic regions.

The designed model finally aimed at define how humanization and networking of care can be measured as gain in efficiency along the overall path.

Conclusions:

Network potential may overload a simply specific hub focused approach. The ''criss cross'' knowledge brokering (could be a strategy able to support clinical and diagnostic activities. To proceed over, in orphan disease handling, we may progress from approaches centered on florid cases toward a balanced screening design, able to guarantee a diagnostic enrichment for a rare condition.

Key messages:

- Implicit and formal Networking cam help rare disease handling.
- Sharing data and diagnostic enrichment are the main issues.

Recording educational information in medical record: the experience of a Rehabilitation Hospital

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Issue/Problem:

Healthcare organizations have the responsibility to provide education to patients and families so that they have the knowledge to participate in the care process and make decisions. Rehabilitative organizations, on account of the long hospitalization period and the specific care plans, have to organize education resources in the most effective manner, ensuring the registration of what has been done in the medical record (MR).

Description of the problem:

During the accreditation process, IMFR (Medical and Physical Rehabilitation Institute - an hospital part of the Udine Healthcare Trust) launched a MR-quality program. A dedicated team of 3 doctors, 4 nurses and 4 therapists changed the way in recording educational information in MR, introducing in April 2018 a specific, independent form, part of the MR, where documenting the achievement of two educational phases: assessment and delivery. The aim of this project is to determine if the introduction of this specific educational form and its sharing process, included in the wider MR-quality program, would improve the recording behavior. Twenty MRs were quarterly analyzed from December 2017 to December 2018, assessing educational forms completeness. Significance ($p < 0.01$) was assessed by Cochran-Armitage test for trends.

Results:

The recording behavior improved significantly from 53% (21/40; Dec-17) to 88% (30/34) in June 2018, after the introduction of the specific education form and remained high also in Sept.2018 (90%, 34/38) and in Dec.2018 (82%, 31/38), with an overall trend of + 29%.

Lessons:

Sharing elements in the creation of the specific educational form with a multidisciplinary approach, within a wider MR-quality program, allows to improve the recording behavior of educational information in it. Hopefully this method would help healthcare professionals and organizations to ensure the education needed to patients and families.

Key messages:

- A multidisciplinary approach is a good model to deal with specific aspects of quality programs.
- A specific form, part of the MR, allows to improve behavior in recording educational information.

The development of an evaluation framework on community impact of CSL in the Netherlands

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Background:

Community Service Learning (CSL) is taking ground in higher education. In CSL, students use their academic skills to address society issues in close collaboration with the community. Reciprocity between community and university is conditional for meaningful CSL. Currently, much attention lies on student skills and competency development. There is less focus on the impact of CSL on the community. To move towards higher impact, we developed an evaluation framework on community impact in CSL.

Methods:

We conducted a systematic literature review to identify criteria on community impact in CSL. The identified criteria were structured in the CIPP framework (Context, Input, Process and Product). Next, we validated the concept framework in 5 CSL activities of the VU University Amsterdam, using participant observation, interviews, questionnaires and document analysis (multi perspective).

Results:

The underlying rationale of the framework is that (supported) community involvement - from start till finish - contributes to higher community impact in CSL. Context criteria relate to motivation and expectations of all stakeholders. Input criteria include available human, financial and material resources. In Process, there is attention to the way CSL is shaped with the community. Product criteria include how community perspectives are integrated in outcomes, and how outcomes are perceived and implemented by the community. The validation of the framework did not result in major changes, but contributed to specification of individual criteria.

Conclusions:

The development and validation of the framework is an iterative and cyclic process, open for further validation and improvement. To realize most impact learning and reflection processes with all stakeholders are essential. The framework should not only be used to asses community impact, but also to design and implement CSL in order to realize high community impact.

Key messages:

- A monitoring and evaluation framework of community impact provides groundwork for high impact CSL activities.

- Meaningful community involvement will result in higher impact CSL activities.

How to implement a successful smoking cessation intervention for adolescents?

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Background:

Policies and programs implemented to promote smoking cessation among youth present disparate results. These variations are explained by interventions themselves but also by context, population and implementation characteristics. Our objective was to analyze these factors, related to enrollment and participation in a smoking cessation program, implemented in vocational or technical schools.

Methods:

Population factors were studied by a systematic review about determinants of smoking cessation among 10-24 years old, updating a previous one.

Contextual and implementation factors were identified by a qualitative multiple cases study. A smoking cessation program, TABADO, had been implemented in 3 regions in France, in 10 vocational or technical schools (1 school/1 case). Data collection included 51 observations, 46 semi-structured interviews, and 3 interdisciplinary seminars.

Results:

The review identified 46 factors probably or possibly related to a successful smoking cessation, both individual (e.g. smoking frequency) and collective (e.g. relationship smoking status, anti-tobacco legislation). The case study allowed us to objectify positive or negative factors that influence the enrollment and the participation in the program (e.g. presence of a referent in the school, combination with the school program). Finally, we identified prerequisites to gather before starting such a program.

Conclusions:

This mixt design highlights factors on which we must focus to increase the success of a smoking cessation program for youth. A key factor is to tailor intervention and implementation modalities to the local context. Results enabled us to product a pragmatic guide, TABADO 2, which is now used in a national scaling process. They also will be used to build an intervention theory, which could be used for any smoking cessation intervention for youth.

Acknowledgments: The TABADO IDF study group, Inca, the région Lorraine and the ARS Nouvelle-Aquitaine for their financial support.

Key messages:

- A smoking cessation program must be a global strategy, considering contextual, population and organizational factors.
- Instead of trying to strictly apply a protocol, a complex intervention must be tailored to the context in which it is implemented.

Participation of medical students in prevention actions: first year of implementation in France

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Background:

Prevention has become an essential part of the health policy in France. Since the autumn 2018, medical students, as well as students in midwifery and paramedics, are required to take part in prevention actions in population. This prevention training is mandatory and aims to increase the number of prevention actions in population and to sensitize medical students to the importance of prevention. National guidelines were published to guide the implementation of this training.

Objectives: This communication aims to describe the implementation of this prevention training in the medical school of University Versailles Saint-Quentin-en-Yvelines in France.

Results:

A total of 155 students in third year of medical school were included in the training (2018/2019). The first step was the creation of e-learnings in 9 domains related to prevention: prevention policy in France, communication, project management, addictions, nutrition, physical activity, sexual education, prevention for the children and prevention for the elderly. They were elaborated by medical doctors of different specialties, public health professionals, nurses, and physiotherapists. The second step was the recruitment of voluntary settings to perform prevention acitons. They were mainly schools (n = 24), but also institutions for disabled children or adults (n = 8), health forums (n = 4), the university health center and the local center for social reintegration of young people. The types of actions performed by the students will be presented at the conference.

Conclusions:

Preliminary results indicate a positive feedback from both the students and the voluntary settings. At this stage, recommendations for the future can already be drawn, such as the inclusion of specific training sessions to lead group sessions of various ages or interdisciplinarity in the actions.

Key messages:

- The participation of medical students to prevention actions in population has become mandatory in France.
- Voluntary settings were mainly schools, but also institutions for disabled children or adults.

Relevance of the health insurance databases to study potentially inappropriate prescriptions

Marie Jardin

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Issue/problem:

Potentially inappropriate prescriptions (PIP) for the elderly constitute a major issue in the quality of ambulatory care. In France, people aged 80 years or older use on average five drugs per day. This polypharmacy is justified in most cases by multimorbidity but it increases the risk of adverse events.

Description of the problem:

In order to optimize general practitioners' (GPs) prescribing practices for the elderly, a project involving the Southeastern Health Regional Observatory (ORS Paca), the Regional Medical Department of Health Insurance Fund (DRSM Paca-Corse) and the Regional Union of Private Practitioners (URPS-ML Paca) was conducted in 2014-2016. Its main objective was to set up a regional mapping tool giving GPs access to drug prescriptions indicators for the elderly in their practice area.

Results:

Based on national guidelines and advice of experts in the field, we calculated 7 different indicators of potentially inappropriate prescriptions (PIPs) for people aged 65 years or older, using drug reimbursement data from the Health Insurance Fund. Those indicators were calculated among patient lists of GPs and covered prescriptions of benzodiazepines, non-steroidal anti-inflammatory (NSAI) drugs, new oral anticoagulants, proton pump inhibitors, antiplatelet therapy... PIPs' prevalence were calculated among GPs' lists of patients. PIPs prevalence differed between drugs type, GPs and territories: for example, the age standardized prevalence of long-term treatment with NSAI drugs varied in 2014 from 2 to 15% between municipalities and from 0 to 14% in 2017.

Lessons:

These results allowed to identify priority areas for intervention, in which continuous medical education sessions with an individual feedback to GPs on their own indicators were implemented, to improve prescribing practices.

Key messages:

- A substantial proportion of elderly people receive PIPs.
- Medico-administrative databases can be used to produce indicators of prescription practices to be used to guide public health interventions.

Complexity in managing the blood transfusion process: experience of an Italian Academic Hospital

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Issue:

Blood components transfusion is a high-risk process due to its complexity and possible consequences in case of error. Preventing mistakes and acting promptly if they occur is a duty of healthcare organizations. The Italian Ministry of Health has drafted a specific recommendation with the aim of reducing transfusion errors.

Description of the problem:

Following a transfusion error occurred in July 2018, a multidisciplinary group including professionals from Clinical Risk Unit (CRU) and Transfusion Department of the Academic Hospital of Udine, carried out an analysis of the blood components issuing process. The 20 most critical steps were identified and grouped into 3 areas: 1)single samples processed individually, 2)appropriate application compliance, 3)environmental interferences. For each step shared solutions were identified and then implemented as new standard practices. From February to March 2019, CRU randomly observed 23 blood components assignments using tracer methodology, evaluating staff's compliance with the new recommended practices (NRP).

Results:

For the sample processing (area 1, n.10 practices), adherence to all ten NRP was 100% (26/26). For the appropriate application compliance (area 2, n.8 practices), adherence to 7 NRP was 100% (11/11), whereas for one (punctual registration of non-conformities) adherence was 86% (6/7). For the environmental interferences (area 3, n.2 practices), adherence to one practice was 100% (2/2), whereas for the other one (avoid answering to incoming phone calls) adherence was 75% (3/4). Overall, professionals behaviour was consistent with the NRP in the observed period.

Lessons:

Identification of critical issues by a multidisciplinary team and measuring the adherence to new practices is crucial in managing the complexity of blood transfusion process.

Tracer methodology, used by CRU to verify adherence to new standard, also allows the hospital to monitor the progress of the achieved performances over time.

Key messages:

- Multidisciplinary analysis of the blood transfusion process and shared development of new standard by all professionals favours their compliance in the practice.
- Tracer methodology is a useful tool to evaluate adherence to recommended practices and monitor the complexity of transfusion process over time.

Roma health mediators in Serbia – good example of multisectoral cooperation in health promotion

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Issue:

Within the framework of the JA CHRODIS plus participants of the WP5 worked on identification of factors that contribute to collaboration within healthcare and between the broader health system and other sectors, as well as their enablers and barriers. In Serbia, practice that was identified and elaborated was aimed at improvement of health of Roma population.

Description of the problem:

Based on available data, health indicators among Roma population in Serbia were two to three times worse than national averages. In order to tackle this issue, government of the Republic of Serbia, started with implementation of the project of education and inclusion of Roma health mediators in the health system. This project has been implemented in Serbia since 2009. Roma Health mediators (Roma ethical minority females) were trained for fast and efficient provision of support to Roma families.

Results:

As a result of the project there was increased number of visits to health institutions and preventive check-ups of target population. Established cooperation between Roma health mediators and other health professionals in centers for primary health care, social care, and local self-government helped them in fulfilling their tasks, but also built capacity of other service providers to work in Roma communities. Through trainings they increase knowledge on various health, social and child care topics.

Lessons:

Capacity building and inclusion of memebrs of vulnerable population into health promotion of the own to this population in terms of better acceptance of specific population population is useful to access groups as they can better understand and adapt to the needs of groups they want to reach. They should have opportunity to share their experience and lessons learned with experts involved in planning interventions for other vulberable groups.

Key messages:

- Building capacity of Roma mediators empowers them for integration into society beyond the scope of the Project.
- Lessons learned should be used for planning further actions for vulnerable groups.

Evaluation of Austrias first PHC: What lessons can be learned?

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Issue/problem:

The Austrian health care system regularly shows high performance. While about 99.9% of the population is covered by the compulsory health insurance system, the system is highly fragmented with shared responsibilities for inpatient and outpatient care.

Description of the problem:

Primary health care in Austria is mainly provided by general practitioners (GP) in solo practises with average opening hours of 16-20 hours a week. This leads to high frequencies in outpatient care departments of hospitals and secondly to inefficiencies due to a high level of uncoordinated care. Thus in June 2014, the Federal Target-Based Governance Commission adopted a new concept for providing primary Health Care in an integrative, quality-assured manner and steering patients to the Best Point of Service. PHC centres are providing care in a multiprofessional approach (psychologists, nutritionists, and nurses) and have significantly longer opening hours with 45 hours per week.

Results:

In 2015, the State Target-Based Governance Commission of Vienna commissioned the Austrian Public Health Institute (Gesundheit Österreich GmbH) with the evaluation of these pilot centers. The evaluation results of the first two years of the first PHC center shows a high level of satisfaction with the services provided by PHC and high level of utilisation, indicating an improvement in the service offered. PHC patients show a significantly higher level of utilisation of general medical care and at the same time a lower level of utilisation of specialist medical care than patients of the control group. Furthermore PHC patients have a significantly lower frequency of contacts in general emergency outpatient clinics.

Lessons:

Changes in structural conditions such as the expansion in the range of services and the provision of care by a multiprofessional team results in advantages for patients, the team and the utilization of services at the best point of service.

Key messages:

- PHC centers can lead to a lower utilization of outpatient departments and thus to an improvement in the coordination of care.
- Cooperation in multi-professional teams can lead to a relief of the physicians and a higher job satisfaction.

Why declare events? What to draw from experience feedback?

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Issue:

In France, the reporting of significant radiation events for nuclear activities is a mandatory system since July 2007 following the accident of oncology in Epinal. Later, the directive 2013/59/EURATOM states that Members of the European Union shall ensure that a system of experience feedback is in place for the dissemination of lessons. In France, it was implemented in 2011 through the publication of a newsletter, ‘‘Patient safety: Paving the way for progress’’ on radiotherapy, it is now extended to medical imaging. Until 2015 the number of reported events was stable but steadily decreasing in radiotherapy since 2016. Lack of time to report, lack of awareness and training of doctors, fear of consequences in terms of communication on the establishment that reports and in terms of control by the ASN following the report may explain the decrease. Educational actions need to be lead to reaffirm the objectives of reporting and reinforce the interest of experience feedback. The French Nuclear Safety Authority decide to focus a newsletter on international reporting systems and Experience feedback based on the reflections of a French institutional working group.

Results:

According to professionals it is sometimes difficult to report an event with impact on patients, easier to work on near miss and even easier to work on events happening elsewhere. Reporting an incident is thus a collective action. The experience feedback process allows learning in order to improve practices in the future and address three aspects: Benchmarking, Prospective risk analysis for the techniques/devices which have never been used in a centre, Analysis of concrete cases during feedback experience meetings. The limit of the current systems is the difficulty in finding precise information due to shortcomings in its structure. A simplified system is needed.

Lessons:

Reporting events on websites highlight new events and enable the solutions implemented elsewhere to be disseminated in our own networks.

Key messages:

- Reporting adverse events or near miss has a collective impact.
- Experience feedback allows dissemination of lessons and prevents incidents.

Survey-based experiential learning - means of raising professional awareness in developing countries

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Background:

Healthcare in post-war Balkans is still under development. Healthcare changes towards more complex clinical scenarios that need different competencies around patients. This study reports on survey based learning to increasing professional awareness for developing sustainable healthcare settings using an experiential learning approach.

Methods:

In this study, researchers and educators identified non-technical skills concepts on individual, team, and organizational levels. These concepts were contextualized into the local setting through interactive workshops. Two pediatric surgery clinics in Kosovo and Bosnia and Herzegovina participated who were part of an international clinical skills training project. The tools and surveys were: Johari window, Kolb’s learning style questionnaire, team members exchange quality scale, the IPEC framework for interprofessional competence, Team STEPPS observation tool and organizational models.

Results:

A model is developed for contextualizing core concepts on professional awareness into a local developing healthcare setting. It entails three steps conducted in consecutive workshops:

Identifying research-based concepts on professional competence on individual, team and organizational levels. Facilitating local contextualization of these concepts by using surveys in interactive workshops. Agreeing on indicators to maintain high professional awareness.

Conclusions:

Capacity-building in public health can be conducted through increasing professional awareness. Professional awareness can be approached in individual, team and organizational dimensions. Established core concepts of non-technical skills can be contextualized in other cultures through a survey-based experiential learning approach.

Key messages:

- Professional individual, team and organizational awareness is a vital part of conducting efficient healthcare.
- The professional awareness can be enhanced through processing core concepts in a local context through facilitated workshops.

Challenges in handling congenital anomalies clusters: a recent mediatic example in France

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Issue:

In 2018 in France, reports of aggregated cases of isolated transverse limb reduction defects, a rare congenital anomaly (1.7 for 10,000 total births) generated a large mediatic interest with environmental factors overtly pointed out. Our aim is to describe the investigations carried out and to share the challenges we met.

Description of the response:

Over a period of 5 years (2010-2015), 3 aggregates were signaled by health professionals in 3 different areas in France. Investigations included case ascertainment, epidemiological analyses, and search for a common exposure. Standardized Incidence Ratios were computed using the 6 French registries's data as reference. In one area, the local registry performed a concurrent analysis using satscan. Parents filled a questionnaire addressing environmental and occupational exposures. Environmental databases were consulted as well as animal health surveillance data.

Results:

Fourteen cases met the case definition. The excess of cases was ascertained in two aggregates located in a two small towns in the western part of France and comprising respectively 3 children born in 2007-2008 (SIR: 87.8 CI95%:[17-256]) and 4 children born in 2011-2013 (79.8 [2.5-204.2]). The third signal included 7 cases born between 2009 and 2014 residing in 7 towns located above the Alps and did not yield a significant excess when related to expected cases in the administrative subdivision (0.94 [0.38-1.95]). The concurrent analysis found a significant excess, generating a lengthy debate. None of the investigations identified a common cause or notable exposure. Delayed feedback and negative conclusions led to incomprehension among families.

Lessons:

Informing stakeholders timely is crucial but communicating effectively about methods used and negative results can be challenging.

Key messages:

- Congenital anomalies clusters are sensitive topics.
- Cluster investigations involve a scientific and a societal component that must both be taken into account in organizing the public health response.

Carbapenemase-producing Enterobacteriaceae (CPE) patient notification exercise

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Issue:

CPE has become endemic in many European countries. Scotland has few locally acquired cases at present and interventions are aimed at minimising transmission of CPE into acute hospital settings.

Description of the problem:

NHS Lothian held an incident management team (IMT) following the transmission of CPE in an inpatient setting. Initial management of the incident included informing and screening all inpatient contacts, enhanced infection control precautions and staff education. The IMT considered whether to inform and screen patient contacts who had been discharged. A literature review was carried out and teams in the UK who had considered patient notification exercises for CPE were contacted. This highlighted variation in approach.

The IMT assessed whether a patient notification exercise was required and considered:

- The need to reduce the risk of CPE transmission in acute hospitals by screening and isolating community contacts on readmission to hospital.
- The ethics of raising patient anxiety around CPE transmission with limited options for effective treatment.
- Risk stratification to identify contacts at highest risk.
- Information Governance: electronic tagging of case notes if patients have not been informed.

Results:

The IMT agreed that a patient notification was appropriate. Contacts were risk assessed to determine those at greatest risk of CPE transmission. After speaking to GPs, 33 patients were sent letters. No screening of community contacts was advised unless they were re-admitted to an acute hospital or resided in a care facility. No further CPE reports have been linked to the situation.

Lessons:

The IMT worked through the issues systematically to protect the public's health without infringing their rights. The IMT advised that the Scottish CPE toolkit should be revised to support future Incidents including how to analyse transmission pathways, undertake patient notification exercises and meet public health ethics standards.

Key messages:

- There needs to be clear guidance on how to manage contacts of patients with CPE once discharged from hospital.
- Team work between Public health and Infection control is essential in manageing incidents of CPE in hospitals.

An objective structured clinical examination to assess the communication skills of students

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Background:

Communicative competence is one of the important components of professional competence that needs to be developed in the process of training future doctors.

Methods:

At the end of the study of the ''General Practice'' module, students of the 5th year of the specialty General Medicine must pass a two-stage exam consisting of comprehensive testing and acceptance of practical skills of an objective structured clinical exam (OSKE) with the participation of volunteers. Students, who passed the exam, anonymously filled out the questionnaire on the evaluation of the organization of the OSKE with volunteers and their communication skills.

Results:

The analysis of the questionnaires showed that 4% of the students noted the unfriendliness of the volunteers, 27% wrote that it was difficult to engage with the volunteers in the collection of the anamnesis, 2% of the students, unfortunately, had never before encountered a similar situation. 12% of students who passed the exam wished to improve the communication skills of the volunteers themselves, for example, they advised to speak louder, not to ask unnecessary and unnecessary questions, to get more real in the role of the patient. Only 10% of examinees decided that OSKE did not develop their communication skills; 24% noted individual stations, which caused them some difficulties. However, the students themselves acknowledged their poor preparedness, including during communication with standardized patients.

Conclusions:

The analysis of the questionnaires showed that the students themselves are self-critical of their communication skills and recognize the need for their continuous improvement.

Key messages:

- The student's communicative competence can be assessed by conducting an objective structured clinical examination.

- Conducting an objective structured clinical examination with volunteers can improve the communicative competence of students.

Benefits from a tabletop exercise in a Heat-Health Action Plan in Amadora, Portugal

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Issue:

National guidelines for Heat-Health Action Plans (HHAP) in Portugal exist since 2004. These guidelines are further developed and implemented at Local Public Health Units (LPHU) together with local partners. Tabletop exercises are a useful tool to improve preparedness. Despite the long experience with HHAP there has not been any tabletop exercise in Amadora.

Description:

Amadora's LPHU organized a tabletop exercise with local partners to improve HHAP preparedness (12th July 2018). It included: LPHU, city hall, civil protection services, local social services, primary healthcare services, local public hospital, and firefighters. The exercise hypothesized a scenario of an unprecedented increase of temperature for an extended period of time, activating the highest level of warning (red) and action in the HHAP.

Results:

During the exercise several issues were identified. Some partners were not clear about the pathway established for red warnings and partners were not aware of relevant HHAP activities. Also, from the 8 sites listed as climate shelters, only 2 were deemed as adequate for using in this scenario, even though they have been listed for several HHAP. Due to the exercise, it was possible to conduct an inspection of said shelters, which hadn't took place yet due to the lack of resources. It was possible to find out that only one shelter was fit for purpose. Additional private facilities were identified as desirable shelter locations during the exercise. A few weeks later, a red warning was issued and clarification arising from the tabletop exercise was useful to properly implement measures.

Lessons:

Despite the perceived frequent and good communication among partners of the HHAP, several issues - mainly regarding the adequacy of shelters - were identified with a tabletop exercise. It also improved preparedness for the following HHAP warning. As such, tabletop exercises should be promoted within HHAP.

Key messages:

- Despite developing heat-health action plans for several years, with the involvement of community partners, unidentified constraints existed in Amadora, Portugal.
- Tabletop exercises should be used more frequently, as we were able to identify and solve constraints within our heat-health action plan using one.

Formative dialogue research - an appropriate strategy in community public health projects?

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Background:

Lately, there has been a call for knowledge-based community public health strategies and for evaluating local public health interventions. In addition to contributing to the public health knowledge base, it is underlined that the evaluations should be formative for ongoing local processes. The community professionals often lack evaluation competency, and a university course (10 ECTS) about process- and self-evaluation has been developed and facilitated for local public health workers. Vestfold County Council and University of South-Eastern Norway have collaborated to develop the course. The course has a particular focus on Formative Dialogue Research (FDR). FDR strategies may emphasize both project impact and processes, and local competences. The FDR approaches also contributes to the public health knowledge base (Rønningen 2010).

Objective:

To examine and discuss whether FDR in combinations with an evaluation course, may be an appropriate strategy to meet the new expectations for community public health evaluations.

Results:

Preliminary results indicate that FDR in combination with a evaluation course, may be an appropriate and desirable approach in community public health projects. The local public health professionals welcome the course. The focus has until now been on the development of the course and the cooperation and dialogues between the university and the county. Questionnaire and interview data collected in September 2019 will exemplify and nuance these preliminary results.

Conclusions:

So far, the developing process indicate that FDR in combination with a course in self- and process evaluation, support FDR as an appropriate evaluation approach in community public health projects and processes.

Key messages:

- The local public health workers often lack competences in project evaluation.
- FDR in combination with a comprehensive course in process and self-evaluation seem appropriate evaluation approaches in community public health projects.

DR Mental health

The role of Emotional Intelligence in health care professionals burnout

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The purpose of this study is to explore the relationship between Emotional Intelligence (EI) and burnout in health care professionals. More specifically, this survey has the purpose of demonstrating the role of EI as a protective factor against the risk of burnout. Health professionals (doctors, nurses, and other caregivers) composed the sample. Health care professionals were invited to complete the following tests: Self Report Emotional Intelligence Test (Schutte et al., 1998; it. ad. Craparo, et al.[35]); Link Burnout Questionnaire,LBQ; Other variables, such as gender, lenght of service (years of professional experience) and organizational department. Major results of this survey underline the relationship between EI and burnout. More specifically, there is a negative and significant correlation between burnout and Emotional Intelligence. Moreover, burnout varies depending on length of service: burnout increases between 5 and 10 years of experience and decreases over 10 years. Indeed, burnout is differently expressed amongst healthcare professionals: more specifically, Psycho-physical exhaustion, Detriment of the relationships and Burnout (total score) impact physician (doctors) more than other investigated health professionals.

These findings seem to suggest the opportunity to improve Emotional Intelligence abilities through specific training programs, useful to promote the ability to cope with stress and to enrich the relationships in the workplace.

Key messages:

- Burnout is more diffuse among health professionals working in emergency departments.
- Emotional intelligence has the role to cope with burnout.

The depression phenotype in a European population-based study

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Introduction:

Depression is a growing public health concern and associated with a number of co-morbidities including diabetes mellitus. The aim was to estimate the prevalence of depression at a population level across different glycaemic statuses while establishing phenotypic characteristics of this sub-population.

Methods:

A national representative cross-sectional study was conducted in Malta (2014-6). Participants were categorized into different sub-populations according to their glycaemic status. Depression prevalence rates and bio-socio-economic characteristics for each sub-population were established. Multiple regression analyses performed to identify links between glycaemic status and depression.

Results:

Depression was prevalent in 17.15% of our study population (CI 95%: 16.01 - 18.36) with a female predominance. The normoglycaemic sub-population had the highest depression rates. Persons with known diabetes had a higher probability of having a history of depression (OR:2.36 CI 95%:1.12 - 4.96), as well as with being of female gender, having lower educational status, smoking tobacco and having established cardiovascular disease.

Conclusions:

Depression was highly prevalent among the normoglycaemic population. Primary care physicians should implement a depression screening tool as part of their routine health check-ups, with special attention to those with cardiovascular co-morbidities and low socioeconomic status.

Key messages:

- Depression prevalent mostly in the normoglycemic population.
- Screening for depression should be part of routine health check-ups.

Depression, anxiety stress and associated factors among university students in France

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Background:

Graduate education is associated with many life changes and stressful events for students, potentially causing depression, anxiety and stress. Prevalence of these disorders and potential associated factors are not clearly identified.

Methods:

A cross-sectional study was conducted among university students in France. The students filled out a self-questionnaire recording depression anxiety and stress with the DASS21. High” and “very High” intensity symptoms were grouped into “presence” of depression, anxiety and stress and “moderate” “light” “normal” were grouped into “absence” of depression, anxiety and stress. Curriculum, perceived academic pressure, financial difficulties, smoking, binge drinking and eating disorders were also recording.

Results:

A total of 1,202 students were included of which 17.8% were healthcare students. The sex ratio (M:F) was of 0.42 with a mean age of 20.0 years. Prevalence of depression, anxiety and stress were respectively 16.4%, 26.4% and 16.0%. After multivariate analysis, female gender was associated with presence of stress (AOR = 1,41 IC 95% [1,03-1,93]). High level of perceived academic pressure (AOR = 2,13 [1,61-2,82], 2,05 [1,57-2,68], 2,35 [1,72-3,22]) financial difficulties (AOR = 1,33 [1,03-1,73], 1,54 [1,19-1,99], 1,37 [1,04-1,82]) and eating disorders (AOR = 2,46 [1,83-3,31], 2,36 [1,75-3,19], 2,21 [1,63-23]) were associated with presence of depression, anxiety and stress. Binge drinking (AOR = 1,48 [1,05-2,09]) and smoking (AOR = 1,46 [1,01-2,13]) were associated with anxiety.

Conclusions:

These results show prevalence of depressive, anxiety and stress symptoms among students. Poor mental health is related to academic and financial difficulties, and is associated especially with eating disorders. There is a pressing need to prioritize mental health of college students through the national public health policies. Additional studies are needed to better understand the relationships between these different factors.

Key messages:

- There is a significant prevalence of depression, anxiety and stress symptoms among Rouen students.
- Depression, anxiety and stress symptoms among students are associated with high level of perceived academic pressure, financial difficulties and presence of eating disorders.

Depressive symptoms and suicidal ideation among medical students: a cross-sectional survey in Turin

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Background:

A high prevalence of mental illnesseshave been detected in medical students (MS) during college. The aim of this study was to evaluate depressive symptoms (DS) and suicidal ideation (SI) in MS and estimate factors that can influence these conditions.

Methods:

In November 2018 a cross-sectional survey was conducted at the School of Medicine of Turin, Italy. The questionnaire consisted of a 30-item sociodemographic part and 3 psychometric tests, including the Beck Depression Inventory II (BDI-II). Overall, 506 surveys were collected. Multivariable logistic regressions were performed mainly. The significance level was $p \leq 0.05$.

Results:

Females were 65% and median age was 22 (IQR 19-24). Median BDI-II score was 9 (IQR 4-15). Presence of DS (BDI-II score>13) and of SI was found in 29% and 15% of the sample, respectively. Preliminary results showed that females (OR 2.03, CI: 1.16-3.56), non-heterosexuals (OR 2.69, CI: 1.49-4-84), participants negative about their college choice (OR 4.79, CI:

2.78-8.26) had a higher risk to report DS. MS who consider unsatisfying their friendships with classmates had a higher likelihood of reporting DS and SI (OR 3.10, CI: 1.16-8.30; OR 2.91, CI: 1.10-7.68, respectively). While the opposite was for those with good economic condition (OR 0.39, CI: 0.16-0.91; OR 0.21, CI: 0.09-0.52, respectively) and those practicing sports more than 90 min/week (OR 0.60, CI: 0.37-0.99; OR 0.47, CI: 0.25-0.89, respectively). Choosing Medicine for profit was related to a higher risk of reporting SI (OR 3.36, CI: 1.43-7.92), having a good family bond to a lower risk instead (OR 0.42, CI: 0.20-0.84).

Conclusions:

Since depression is the leading cause of disability worldwide, it has to be a public health priority in Europe. It is essential to consider MS as at risk and set up interventions to improve factors surrounding them and help them to face difficulties in personal and academic life, without forgetting that they will be the future health professionals.

Key messages:

- Females, non-heterosexuals, students negative about Medical School choice and students unsatisfied with their friendships with classmates had a higher risk of reporting depressive symptoms.
- Students unsatisfied with their friendships with classmates and students who chose Medical School for profit had a higher risk of reporting suicidal ideation.

Development and preliminary psychometric properties of Mental Health Promotion Scale

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Background:

There is no valid and reliable scale for assessing mental health promotion ability for adults in Turkish language. The purpose of this study was to develop a scale to mental health promotion ability for adults and to test the validity and reliablity of this scale.

Methods:

This methodological study was conducted in Istanbul over the period October 2016- May 2018. The three rounds of the Delphi study were cunducted to develop the items of the scale and to determine the content validity. Thirty- three experts were participated in the Delphi study. A convenience sample of 452 adult people was recruited. The scale was tested for construct validity with Exploratory Factor Analysis (EFA), after which the scale's reliability was evaluated for item-total correlations using Pearson's correlation analysis and for internal consistency with Cronbach's Alpha.

Results:

At the end of the first Delphi round, 160 items were compiled. Experts reached consensus on 93 items of scale at the end of the third Delphi round. In the first EFA, twenty two factors with eigenvalues greater than 1 explained 65.2% of the total variance. Items with factor loadings of less than .30 and those that appeared in more than one factor with differences of less than %10 were removed from the scale one by one and the analysis was repeated. In the last EFA of the 47-item scale, twelve factor was found with an eigenvalue greater than 1 that explained 64.3% of total variance. The scale's item-total correlations ranged between .36 - .62 and Cronbach's coefficient alpha was calculated to be .93.

Conclusions:

This scale was found to be valid and reliable. It can be used to assess the mental health promotion ability of adults who native Turkish speaker.

Key messages:

- The Mental Health Promotion Scale has been found to be valid and reliable.
- The Mental Health Promotion Scale can be used to assess of mental health promotion ability for adults.

Antidepressant use in over-indebted individuals compared to the general population in Germany

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Background:

About ten percent of European households across all socio-economic groups are considered over-indebted due to ongoing difficulties meeting financial commitments and living expenses. Studies found an association between over-indebtedness and physical and mental health such as depression independent of standard socioeconomic status measures. However, antidepressant use in the over-indebted population has been understudied. In view of the substantial economic and social burden of mental illness in Europe, the aim of this study was to examine the association between over-indebtedness and antidepressant use in Germany to advance the understanding of socioeconomic inequalities in mental health.

Methods:

We conducted a cross-sectional survey among clients of 70 debt advice agencies in North Rhine-Westphalia, Germany, in 2017 (OID), and merged data with the first wave of the German Health Interview and Examination Survey (DEGS1) representative of the general population. We used descriptive statistics and multiple logistic regression analysis to examine antidepressant use in the previous 7 days (OID: n = 699; DEGS1: n = 7115).

Results:

Antidepressant use was more frequent in the over-indebted (12.3%) compared to the general population sample (5.0%). After adjustment for age, sex, education, employment, marital status and chronic disease, over-indebted respondents were more likely to use antidepressants than the general population sample (aOR 1.83; 95% CI 1.35-2.48).

Conclusions:

Prevalence of antidepressant use was higher in the over-indebted compared to the general population. The association between over-indebtedness and antidepressant use cannot be fully explained by standard socioeconomic measures. Over-indebtedness reflects a relevant public health issue that needs to be addressed in health care, social policy and research. There is an urgent need to develop public health activities that specifically target those at risk of mental illness and over-indebtedness.

Key messages:

- Over-indebtedness is associated with antidepressant use.
- Public health interventions are needed to prevent adverse health effects of over-indebtedness and safeguard access to care according to need.

Mapping of early intervention programs for psychosis in France in 2018

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Early intervention programs (EIP) have been developed in many countries (United States, Europe, Canada) and are now widely considered effective in the treatment of early psychosis. In France, current national policies in the field of mental health promote the development of early intervention but France has not yet met national standards of care for EIP. A recent report from the London School of Economics (2016) even mentioned the delay of France in this area, referring to only one EIP in the country. A preliminary investigation conducted in 2017 showed a strong dynamic with many ongoing projects which led us to renew this investigation in 2018.

This was a two-phase study. First, an inventory was achieved through a bottom-up approach and many contacts across the country which may either provide this kind of care or know of such initiatives: psychiatrists, healthcare facilities or Health Regional Agencies. Then, an online declarative survey was administered covering structure of attachment, dedicated team, funding, targeted population, activity in 2017, difficulties and prospects. Between May and October 2018, 69 EIP were identified in France: 35 were operational and 34 were being established or beginners. The 35 identified operational programs were located throughout the country with a few disparities. Half of the programs had been existing for 2 years (17/35). All programs operated with multidisciplinary teams, including at least one psychiatrist and with a mean of 5.9 dedicated full-time equivalents workers. Half of the programs offered case management (48.6%). Most programs were not as a specific setting and had mixed activities, including chronic patients with schizophrenia and most programs offered an integration of ambulatory follow-up in the living environment for some patients (77.1%).

A real dynamic has been launched in France. This study will help to improve visibility of programs and to harmonize and ensure a high level of care.

Key messages:

- This study shows that a real dynamic has been launched in France.
- This study shows a need for teams to harmonize and standardize practices of care.

Relationship between burnout and work engagement among Sri Lankan collegiate cycle students

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Background:

Keeping on par with the emerging trend towards positive psychology focusing on optimal functioning, burnout research is also associated with a shift towards its positive antipode; work engagement. This study was aimed at determining the relationship between burnout and work engagement among collegiate cycle students in Sri Lanka.

Methods:

A school-based, cross-sectional study was conducted among 872 grade thirteen students in 15 government schools in the Kegalle district, Sri Lanka. The validated Sinhala versions of the 15-item Maslach Burnout Inventory-Student Survey and the 16-item Utrecht Work Engagement Scale-Student Version were used to assess burnout and work engagement respectively. The relationship between subscales of burnout; viz., exhaustion (EX), cynicism (CY) and reduced professional efficacy (rPE); and subscales of work engagement; viz., vigor (VI), dedication (DE) and absorption (AB); were assessed using Pearson product-moment correlation coefficient.

Results:

The response rate was 91.3%. The EX subscale of burnout had strong negative correlations with VI ($r = -0.699$) and AB ($r = -0.642$) subscales and a moderate negative correlation ($r = -0.475$) with DE subscale of work engagement. The CY subscale of burnout had a strong negative correlation with AB subscale ($r = -0.577$), a moderate negative correlation with VI subscale ($r = -0.391$) and a weak negative correlation ($r = -0.195$) with DE subscale. The rPE subscale of burnout had weak negative correlations with DE subscale ($r = -0.218$), AB subscale ($r = -0.206$) and VI subscale ($r = -0.128$). All these correlations between the subscales of burnout and work engagement were statistically significant ($p < 0.001$).

Conclusions:

Given the significant negative correlation between burnout and work engagement, exploring student work engagement may allow identification of their positive psychological characteristics that can be incorporated in formulating packages for preventing burnout.

Key messages:

- Bivariate correlation revealed that all three subscales of burnout had statistically significant negative correlations with all three subscales of work engagement.
- Exploring student work engagement may allow identification of their positive psychological characteristics that can be incorporated in formulating packages for preventing burnout.

MENTAL HEALTH ACT, MALTA 2012 - A personal reflection on 5 years working with a new legal framework

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The Commissioner for the Promotion of Rights of Persons with Mental Disorders (CMH) was established in Article 5 of the Mental Health Act approved by the Maltese Parliament in December 2012. The whole Act was completely in force on 10th October 2014.

The involuntary care process is being closely monitored. Patients are being followed up within the time-frames established by the new law. Although not strictly comparable, length of stay in involuntary care has diminished radically. Patients are being discharged from compulsory treatment orders or transferred to community treatment orders rather than being left on ''leave of absence''. Community involuntary care is the preferred option of following up difficult cases. This shift requires commitment to strengthen community support services and render them sustainable.

The applications for involuntary care are progressively being better completed and the quality of the information backing requests for involuntary detention of persons is improving. Care plans are being submitted, but their completeness and their quality merits revision. The issue of availability of human resources is a critical issue which regularly features in feedback with care teams. Evidence of greater involvement of patients and responsible carers in the care planning process should be better documented if it is indeed happening. The level of awareness of patients' rights in terms of the Act merits deeper evaluation.

The CMH must continue to provide a voice to vulnerable persons with mental disorders and their loved ones. Maximization of the potential of persons with mental disorders is not only a question of social justice but also critical for the sustainability of our health system and the prosperity of our society. The burden of mental disorders is increasing exponentially with the modernization of our society and those who are not coping with this burden merit active consideration and support.

Key messages:
- Public health advocacy and the improvement of patient rights.
- The use of legislative tools in reforming service delivery.

Building Resilience in Adolescents and Youths - The Maltese Scene

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The Office of the Commissioner for Mental Health in Malta was established in 2011 to promote and protect rights of persons with mental disorders and their carers. This advocacy role includes monitoring of involuntary care, regular reporting on quality of care and care environments, in-depth analysis and recommendations on emerging issues such as mental health literacy, multidisciplinary care plans, drug addiction services and stigma and regular networking across ministries, agencies, departments, and NGOs, breaking silos and building bridges.

Data for 2018 shows that acutely ill young people (10-29 year olds) were 30% of acute involuntary admissions. Males and foreign nationals from medium and least developed countries were more frequently represented. Substance abuse, mood disorders and psychotic disorders were the more common diagnostic groups. Building resilience and providing opportunities for early intervention are key elements of better mental health and well-being in the younger generation.

Six examples of good practice in adolescent and youth mental health from Malta will be presented: Youth.inc by AÄ¡enzija Å»gÄ§aÅ¼agÄ§; Kellimni.com by SOS Malta; Youth Mental Health First Aid by Richmond Foundation; Research and Professional Education by ACAMH (Malta); Student Support Services at MCAST MALTA; Project Enlight! by Enlight Foundation. Two of these initiatives were recognised as best practices at European level in a peer learning exercise conducted by the Dutch Youth Institute.

The recommendations are: more focused approaches towards young people with acute mental disorders with special attention to their specific needs; the identification of young people in trouble; work programmes that build resilience, life-skills and employment prospects; the intensified use of refined electronic and social media tools for promotion, prevention and early intervention; and active support and encouragement of peer group development and self-help initiatives.

Key messages:
- Networking stakeholders to break silos and build bridges.
- Resilience and early intervention for better mental health and well-being.

Psychotropic drug purchases among Finnish disability pension applicants with mental disorders

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Purpose:

Trajectories of psychotropic drug purchases around disability pension process have only been studies among awarded applicants. The aim was to follow and compare psychotropic drug purchases between awarded and rejected applicants before and after the application ruling, and to analyse whether such differences are affected by diagnostic group and sociodemographic background.

Methods:

A representative 70% sample of Finnish adults applying disability pension due to mental or behavioral disorder in 2009-2011 (N = 18,087) were followed for four eight years in three-month periods. Registers of purchased psychotropic drugs measured in defined daily doses (DDDs), gender, age, occupational class, unemployment history, and diagnostic group were used. The DDD levels and trends were analysed using growth curve models.

Results:

The average purchased DDDs of psychotropic drugs increased before the application ruling and decreased gradually thereafter among both awarded and rejected applicants. Before the application ruling the DDD level was higher for the rejected applicants. However, the increase in DDDs was steeper for awarded applicants. The inversed U-curve of purchase amount was most prominent awarded applicants in diagnostic groups of bipolar disorders, depression, anxiety disorders and schizophrenia. The results partly varied between sociodemographic groups.

Conclusions:

The early high level of psychotropic drug purchases of rejected disability pension applicants signals long running ill-health, calling for earlier measures to uphold their functional ability. Respectively, for awarded applicants, the steep DDD increase before the ruling may reflect accurate identification of worsening condition but also access to precise treatment.

Key messages:
- Rejected disability pension applicants with mental disorders suffer from long-running mental ill-health, calling for earlier measures to uphold their mental health and prevent the pension process.
- Awarded disability pension applicants with mental disorders may have access to more precise treatment, but their worsening condition appear to be accurately identified by Finnish system.

The Good Behavior Game: when the classroom becomes the playground for life skills (Toulon area)

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Children presenting disruptive and antisocial behavior are more at risk of developping health and life complications. The "Good Behavior Game" (GBG) is an American classroom behaviour management program implemented by trained teachers. Its effectiveness in public health has been shown by several scientific studies. The program was recently adapted for France by the GRVS, Nice. During 2017-2018, four schools - 1,400 children- benefitted from the GBG program, conducted in the Toulon area by the CODES 83 under the supervision of the GRVS. During their bi-monthly visits to the 29 teachers in training, coaches collected data reports on the past games, and observed a live GBG session. They discussed then with the teacher to build the best classroom management strategy.

Does the GBG help pupils improve their peer relationships? What can the program realistically bring in terms of classroom wellbeing? Those questions are crucial to assess, children's quick benefits, as well as the development of life skills as protective factors for healthy living.

Based on the coaches' observations and feedbacks with the teachers, preliminary results tend to demonstrate that the GBG help pupils improve their peer relationships, notably by evoking cooperation and inclusive behaviors. Pupils present a more positive state-of-mind whether to give a personal opinion, to share speaking time, learn patience, to make collective decisions, to be aware of one's need, to peacefully deal with disagreement, to explain instructions to one another, to ask for another point of view. More active and peaceful approaches to conflict resolution have been noticed. The program seems to enhance wellbeing at class including positive peer interactions and self-appreciation.

Regarding the experiment in the Toulon area, GBG has a strong potential to develop social and life skills of children. GBG seems to work towards better self-esteem, a key lever for peer-pressure resistance and for making healthy choices.

Key messages:

- The ‘‘Good Behavior Game’’ (GBG) creates a positive environment in the classroom, leading children towards positive peer interactions.
- GBG enhances protective factors against peer-pressure an important determinant of risky behavior.

Suicide epidemiology in Italy: a population-based study in Piedmont Region

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Background:

Among the largest Italian Regions, Piedmont (Northern Italy) is the one with the highest rate of suicide. Aim of the study was to describe intentional self-harm related deaths in Piedmont analyzing trends by gender, age, area of residence, socio-economic level.

Methods:

Observational mortality study of the resident population in Piedmont from 2003 to 2014. Age-standardized rates of suicide (ICD-10: X60-X84) were estimated, by gender, health district of residence, mountain/level ground, and educational level. Suicide methods and places of occurrence by gender and age were inquired.

Results:

In a context of declining injury related mortality, especially for traffic accidents, the regional trend of suicides shows only a slight decrease, becoming the main cause of injury deaths since 2009, equal to 21% of all injury deaths in the studied period. There are no significant trend variations related to the period of economic crisis. The occurrence is higher among men in general and particularly in older people, persons with low educational level and those living in deprived areas. The main suicide method used by women is ‘‘jumping from a high place’’ (36.7%) while the main one for men is ‘‘hanging, strangulation and suffocation’’ (50%). This is globally the most frequent method for all ages. ‘‘Self-poisoning’’ gains importance between 30 and 49 years old. Suicides occur for over half of cases in home.

Conclusions:

Suicides are a public health and social concern. Yet despite its extent, this problem is still not adequately considered in public health prevention programs. Social and geographical gradients highlitght the importance to improve mental health service provision in deprived areas and to enhance public social welfare measures. Further contributions to a deeper understanding of the determinants of self-harm behaviour and suicidal risk can be obtained from health information systems, in particular data from Emergency Departments and multiple causes of deaths records.

Key messages:

- In Italy, suicides are the main cause of injury deaths, without trend variations.
- Occurrence is higher among men, older people, persons with low educational level and those living in deprived areas.

Identifying People with Dementia in Electronic Primary Care Records in the UK

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Background:

Many epidemiological questions need to be answered regarding dementia, including the causes, prognosis, comorbidities, and treatment of the condition and complications. A routine electronic primary care dataset provides a way of investigating some of the complicated factors with rich information. However, there has been concern regarding whether dementia is recorded well enough.

Methods:

This study has therefore explored this by conducting a systematic review to understand how dementia has been identified previously in primary care databases in the UK, and added to this by exploring additional terms and symptoms, and medications that might be helpful in identifying people with dementia. The study estimated the prevalence and incidence rates of dementia in The Health Improvement Network (THIN) database and compared with other longitudinal studies using the comprehensive list of diagnostic codes.

Results:

The estimated incidence rates per 1,000 person-years for the 60+ age group who had any of the first diagnosis among the Quality Outcomes Framework (QOF) defined codes, Other diagnoses, Dementia symptoms and Prescribed medications were 2.5, 4.7, and 15.9 in 1995, 2004, and 2015 respectively. The estimated prevalence were 2.8, 3.2, and 10.2 in 1995, 2004, and 2015 respectively.

Conclusions:

The codes related to dementia symptoms (represented by mini-mental state examination, the six item cognitive impairment test, referral to memory clinic and behaviour assessment) seem to cover a broad definition of dementia or pre-existing dementia population in the UK primary care records. At least, using of the Other diagnoses (represented by dementia annual review, senile/presenile dementia and dementia monitoring) in addition to the QOF defined codes, and Prescribed medications were evidenced that will not missing out a number of people with dementia.

Key messages:

- The codes related to dementia symptoms seem to cover a broad definition of dementia or pre-existing dementia population in electronic primary care records in the UK.
- Nevertheless, the codes about non-specific or temporary symptoms may need to be used carefully as it is possible for memory or cognitive function to be impaired temporarily due to other factors.

DR Mental health

Child protection in medicine - closing gaps in continuing education through e-learning

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Background:

Child abuse is a major problem across Europe. The consequences are often serious and long-lasting disorders which, in addition to the individual burden, are extremely costly for the national health system. It is important to prevent or recognize child abuse at an early stage and to provide adequate help to those affected. Health professionals are privileged first contact persons for the victims. However, the WHO assumes that about 90% of cases of child abuse in medical institutions remain unknown. It is therefore important to train health professionals in this field. For this reason, in Germany an E-Learning course on child protection in medicine is currently being developed and evaluated. This article is intended to present the results of the accompanying evaluation of the E-Learning course.

Methods:

The accompanying evaluation collected and analyzed the graduates' opinion on the course, its contents and the topic of child protection in medicine in general. Knowledge and competence levels were surveyed before and after the course and evaluated with a t-test for related samples.

Results:

The evaluation of the course showed a high relevance of the topic of child protection in medicine and the rather low attention paid to the topic in the medical field. The course was, however, assessed very positively and the majority of graduates were already able to apply what they had learnt in their daily work. The pre-post design showed a significant increase in knowledge and skills as a result of the course.

Conclusions:

It turned out that the E-Learning course on child protection in medicine closes an existing gap in the continuing medical education system. The evaluation also shows a success of the program and thus a reduction of uncertainties in child protection procedures among health professionals. A corresponding E-Learning offer for other European countries should be considered in order to address the comprehensive problem of child abuse across the whole of Europe.

Key messages:

- Too little attention is paid to child protection in the medical field.
- E-Learning can effectively train health professionals in child protection, has a wide reach and is flexible in use.

Mental health service use among university students with adverse childhood experiences

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Background:

Adverse childhood experiences (ACE) are a risk factor for mental health disorders and serious somatic illnesses. There is a need for preventing ACE and using mental health care by youth who experienced them. Aims of this study were to examine which ACE are related to mental health service use and to identify a scope of unrecognized needs for these services among students who had experienced abuse/neglect in childhood.

Methods:

Descriptive cross-sectional study was performed on a sample of 2.381 first-year students from six universities in Serbia in 2014. The survey instrument was a questionnaire developed by WHO and CDC. Thirteen ACE (covering household dysfunctionalities, abuse, neglect, peer and collective violence) and using of mental health services at least once during lifetime were assessed. Data were analyzed by univariate and multivariate logistic regression.

Results:

Compared to respondents without particular ACE, odds (±95% CI) of mental health service use were higher only in those with next adversities: parental divorce, OR = 2,26 (1,53-3,33); suicidal/mentally ill family member, OR = 2,21 (1,42-3,44); witnessing partner violence, OR = 1,51 (1,04-2,18); peer violence, OR = 2,14 (1,51-3,03); collective violence OR = 1,48 (1,05- 2,10).

Among respondents who had experienced emotional neglect, 81% have never used professional help. For physical neglect, physical and psychological abuse this percentage was 83%.

Conclusions:

The study highlights ACE associated with mental health service use and shows a significant presence of unrecognized needs for these services. There is need for: determining barriers in this area and formulation of effective health promotion strategies; more consistent application of legislation; conducting screening on child abuse/neglect in families with a higher risk for them.

Key messages:

- High share of youth with childhood adversities remains without help of mental health specialists.It opens the issue of barriers on the side of youth as well as on the side of health system and society
- Considering consequences of adverse childhood experiences, there is need for comprehensive public health interventions in order to increase mental health service use among young people with ACE.

Early recognition of mental health problems in Croatia.

Danijela Stimac

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Issue/problem:

Mental disorders account for the largest and fastest growing categories of the burden of disease in Croatia. Around 30% of the population has experienced some form of mental illness in the past year. 32% of them had more than one mental health problem. 50% of mental disorders arise by the age of 14. School medical doctors in Croatia are in the position to do early recognition of mental disorders during regular check-ups of school children. It is very important that the health care system helps people to be aware of early signs of mental health problems and enable people to get the timely treatment. According to those facts, Croatian Institute of Public Health starts the preparation for implementing screening for mental health risks of school children. The screening will be implemented by the school medical teams for all students as part of regular yearly check-ups in the 5th and 8th grade of elementary school and 1st grade of secondary school. The screening will be carried out using the YP-CORE questionnaire, which measures the degree of general mental distress. Students at increased risk will be referred to Mental Health Departments in County Public Health Institutes. Mental Health Department's team of experts, which includes psychiatrist, nurse and psychologist, will carry out further diagnostic and treatment. Education of school staff, which includes teachers, school psychologists, special educators, social workers, nurses who are in direct contact with the children will also take place. Parents also should be educated on early recognition of mental disorders and should be recognized as partners in diagnostics and therapy throughout the child's life.

Lessons:

Early recognition of mental disorders leads to a reduction of psychological distress and increased feelings of control over one's health.

Key messages:

- Early recognition of mental disorders leads to a reduction of psychological distress and increased feelings of control over one's health.
- School staff and parents should be partners in earliy recognition and treatment of mental disorders of school childrens.

Policies for psychiatric rehabilitation: inclusion through planning permit legislation changes

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Issue:

Mental illness increases. Europe has the highest suicide rates. Yet, psychiatric provision is stull pushed towards the fringes even in new small-scale structures. This, contradicts Social Psychiatry, ignores WHO directions and undermines European health and equity.

Description of the problem:

Changing mental health facilities planning legislation could support integration. Using Greece as a case study, we examine how mental health planning and licensing legislation affected national integration outcomes. This was policy, time-intensive project to address gaps remaining at the end of Psychargos-the national de-institutionalisation programme. It revisited the licensing of facilities to prevent the Greek psychiatric population from facing homelessness with Psychargo's closure. The research identified solutions for the licensing of psychiatric service provision. Most of the remaining issues related to planning permits. Methodology included literature review, site-visits, consultations with Psychargos leadership and a detailed questionnaire designed by the researchers distributed via email to all facilities of Greece. 112 out of 116 of all community based facilities chose to participate.

Results:

We identified the country's planning legislation as important contributor to exclusion. The uses of land prevented facilities from being located in neighborhoods and promoted the development of mental health accommodation in industrial-type buildings or segregated areas. Uses needed relaxing for mental health. This generated functional complications. It necessitated the introduction of new national design guidelines.

Lessons:

This project shed light on a model of de-institutionalisation that has already been applied in a European country with limited resources. It could have great value to countries starting de-institutionalisation. It could be relevant to the most advanced countries such as the UK, as several of their 'community-based wards' are still in hospital campi.

Key messages:

- Buildings affect psychiatric de-institutionalisation (types, location, layout and equipment). De-institutionalisation buildings might undermine re-integration. National provision(s) need revisiting.
- Special use creates difficulties for mental health facilities to be located close to where people leave. Enabling flexibility in the choice of buildings promotes inclusion.

The social invisibility of mental health: understanding social exclusion through place & space

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Background:

The European target that the 5% of the healthcare service budget goes to mental health might not be enough to cover the inequity between health and mental health provision. The project is a multi-disciplinary, research-through-arts project, involving a Faculty of the Built Environment, a Division of Psychiatry and a School of Art. The project aims to identify elements demonstrating inequality demonstrated from place and space related to the facility provision.

Methods:

The research compares mental vs healthcare facilities inside a catchment area, with photographs of the facades of the buildings and mapping their proximity to public transportation. It juxtaposes mental/healthcare facilities for access, condition and status compared to their surroundings.

Results:

A book and an exhibition close to Bentham's auto-icon, the designer of Panopticon custodial facility, demonstrated inverse links between his Panopticon, and the invisibility that NIMBYism produces towards the mentally ill that resulted in their exclusion, within deprived, vandalized, under-funded, isolated from public transport facilities ''in the community''.

Conclusions:

The project identified factors that contribute to the isolation of mental health facilities in terms of both space and place, and set the basis for further research in future projects. It demonstrated visually the under-budgeting of mental health facilities and their stigmatization as expressed by the centrality of locations and their overall projected image. This outlined the path for integrated, transdisciplinary research in the future involving architecture, arts and psychiatry. The project increased the awareness of the general public on social injustice, stigma and mental health. It combats NIMBYism and supports the fairer allocation of resources and placement of health facilities, aiming to put pressure to stakeholders involved in the NHS decision. Actions have been taken by the Trust involved to change.

Key messages:

- Inequalities between building (facades and location) contribute to mental illness stigma: this is what the general public views daily.
- Architecture can be a powerful medium to support inclusion.

Evaluation of Cyber Bullying and Self-Esteem in High School Students

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Background:

Cyber bullying (CB) is a repetitive use of information and communication technologies to harm other individuals. In recent years, CB has become more common among adolescents with the increase in availability of technological devices and technological developments. CB may harm the emotional, social and psychological development of the individuals of developmental age and social relations. CB is reported to be higher in people with low self-esteem. The aim of this study is to determine the frequency of CB among high school students, to examine some variables which may be related and to evaluate self-esteem.

Methods:

This is a cross-sectional study conducted between 1 May-30 June 2018 among high school students in Sivrihisar. The study group consisted of 712 students which 60.1% were female, 39.9% were male and the mean of ages was 16.3±1.2 years (ranged 13-20). CB was evaluated with 2nd Revision of the Revised Cyber Bullying Inventory (RCBI-II) and self-esteem was evaluated with Rosenberg Self-Esteem Scale (RSES). Chi-square, logistic regression and Spearman correlation analyses were used to analyze the data.

Results:

The frequency of CB was 57.6% (n = 410). The frequency of CB was higher in men (OR:1.45,CI:1.01-2.1), the group who accept the friendship request of the people they don't know in the virtual environment (OR:1.84,CI:1.22-2.78), who had problems with anyone on internet (OR:2.27,CI:1.54-3.35), who tells about something that can't speak in real life (OR:2.13, CI:1.48-3.06), who share the problem orginated from online communication with anyone around (OR:1.48, CI:1.03-2.15). There was a positive weak correlation between the scores of the RCBI-II and RSES.

Conclusions:

CB is a common problem among high school students. There is a weak negative relationship between the level of CB and self-esteem. It may be useful to increase the awareness of students, parents and teachers on the subject and to provide psychological support to students to reduce the level of CB.

Key messages:

- It is remarkable that the self-esteem of cyber-bullies is low.
- Risky behavior on the internet is an important risk factor for cyber bullying.

Reflective citizens as a tool for well-being and public health achievement (Novi Sad, Serbia)

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Issue/Description:

Reflective Citizens (RC) as 'psycho-social transitional spaces' - were established in 2005, when Serbia joined the International Listening Posts (LP) Network of OPUS (Organization for Promoting Understanding of Society). Recognizing the need for more reflective citizens' spaces, for continuously ongoing work through social trauma, Psycho-Social section (PSS - GAS Belgrade) began organizing them more often and in different cities. Serbian RC developed specific conceptualization and methodology, carefully integrating aspects of LP, group analysis, group's relations, and social dreaming, which are still in the process of evaluation and improvement.

Results:

RC in Novi Sad have started in 2014, with a huge enthusiasm, as a team work of PSS. It is recognized that Novi Sad, as a multinational and specific multicultural environment could develop Applied Reflective Citizens - Citizens' dialogue in cultural spaces in Novi Sad, as supportive and open space for all citizens who wish to develop themselves, multiculturalism, tolerance and better social environment. At the seven workshops organized by now, the beginning was marked by a session of social dreaming. Free psychosocial associations in thinkrooms have defined the topics: loneliness, helplessness, walls and borders, migrations, diversity, mental malnutrition, the presence of evil and the need for goodness, lack of communication... and on the basis of them, the corresponding hypotheses.

Lessons:

Applied Reflective Citizens have become the support and open space for all citizens who want to contribute to multiculturalism, tolerance, a better social environment, understanding the environment and building incentive bridges in communication through dialogue and also to contribute to a positive cultural climate, building cultural capacities and fostering cultural dialogue through mutual reflection, thus contributing the quality of life, which is of public health significance.

Key messages:

- Reflective Citizens can be a contribution for improving health in community through fostering dialogue and mutual reflection.
- Reflective Citizens give an open space for all citizens who want to contribute to multiculturalism, tolerance, better social environment, thus contributing quality of life, and to public health, also.

The impact of participation in support groups on mental health of parents having children with autism

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Introduction:

Whilst there is accumulated evidence about the high prevalence of stress and mood disorders in parents of children with autism, few studies have shown that participating in parental support groups was associated with less mental health problems. This study was aimed to explore the association of participation in support groups with stress and mood disorders in parents of children with autism in Kazakhstan.

Methods:

Participants (n = 146) were recruited to this cross-sectional survey from autism non-governmental organizations and Republican Children's Rehabilitation Center in Nur-Sultan city during April-December 2018. A 59 item survey consisted of questions on parental socio-demographics, needs, participation in support groups, depression, anxiety and stress (DASS), and Multidimensional Scale of Perceived Social Support (MSPSS). Descriptive, bivariate and multivariate logistic regression analyses were performed in STATA 15.

Results:

44.4% of parents reported experiencing stress, and almost half of the sample had elevated depressive (53.7%) and anxiety symptoms (47.4%). 45.3% of participants were members of parental organizations; there were no significant differences in the prevalence of stress and mood disorders among members and non-members of parental support groups. Results of the multivariate logistic regression showed that parents with older autistic children (OR 1.37, p-value 0.001), less family support (OR 0.894, p-value 0.044) and higher income (OR 3.01, p-value 0.025) were more likely to be members of support groups.

Conclusions:

These findings indicate the need to increase support groups to under-served populations of Kazakhstan's families with autistic children. Additional efforts are needed to strengthen the role of support groups in meeting the emotional needs of the parents.

Key messages:

- Parents of children with autism spectrum disorder experience elevated level of stress and mood disorders; however

participation in support groups was not beneficial for relieving parental distress.
- Further research is warranted to explore the benefits of participation in support groups, and interventions are needed to strengthen the role of support groups in meeting the needs of parents.

Verbal victimisation and mental health of sexual minority adults in France

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Objectives:

Sexual minority individuals face minority stress, and specific discrimination and abuse that might increase their risk of having mental health problems. We examine associations between sexual orientation, experienced violence in the past year, and mental health outcomes in a representative sample of French adults aged 18 to 75 years.

Methods:

Analyses were based on the ''Health Barometer'' (Baromètre Santé) a nationally representative, cross-sectional survey which recruited 25,198 adults in 2017. Data were weighted to be representative of the French adult population. Four mental health outcomes occurring in the preceding year or currently were examined: a) current depressive symptoms, b) having experienced a major depressive episode, c) suicidal ideation, and d) suicide attempt. We conducted mediation analysis using the counterfactual approach to evaluate the contribution that verbal violence victimisation experience in the preceding year has in the association between sexual orientation and mental health outcomes.

Results:

Sexual minority adults were more likely to experience verbal violence in the last year compared to heterosexual individuals (22% vs 11.4%). They were also more likely to have experienced each of the four mental health outcomes. Verbal victimisation in the preceding was found to significantly mediate the association between sexual orientation and mental health outcome with mediated proportions varying between 15 to 22%.

Discussion:

Initiatives that aim to structurally reduce stigma and victimisation against sexual minority individuals, but also improve social support and resilience, could have a significant impact on their mental health and well-being.

Key messages:

- Sexual minority adults are more likely to experience verbal violence, and mental health problems.
- Verbal victimisation partly explains the increased risk of having mental health problems among sexual minority individuals.

Sexual violence and suicidal ideation among French adults, a mediation analysis

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Objectives:

Sexual violence against women is endemic and is linked with a host of mental health problems and suicidal behaviour. We test whether sexual violence is more prevalent and have more damaging psychological effects among women compared to men, and quantify its mediating role in the association between sex and suicidal ideation and behaviour.

Methods:

We used data from the ''Health Barometer'' (Baromètre Santé) 2017 a cross-sectional phone survey, which recruited a nationally representative sample of French adults aged 18 to 75 years in 2017 (n = 25319). Data were weighted to be representative of the French adult population. Outcomes included suicidal ideation, imagery of suicide, and suicide attempts in the preceding year. We conducted mutlivariable mediation analysis using the counterfactual approach to evaluate the contribution that lifetime sexual violence has in the association between sex and suicidal ideation and behaviour.

Results:

We found that women are five times more likely to have experienced sexual victimisation, and are more at risk of any suicidal ideation and imagery of suicide in the preceding year compared to men. Women and men had comparable rates of suicide attempts in the preceding year.

We estimated that 47% of the increased risk of suicidal ideation in the preceding year women have compared to men is mediated by lifetime sexual assault. Lifetime sexual assault also explained 39% of the association between sex and having imagery of suicide.

Discussion:

Our findings reiterate the importance of the prevention of sexual violence and an adequate care for sexual assault victims, especially women, in public health and mental health policies and initiatives.

Key messages:

- Women are five times more likely to have experienced sexual victimisation compared to men, and are more likely to suffer from suicidal ideation in the preceding year.
- Experience of lifetime sexual violence contributes substantially (around 50%) to women's increased likelihood of suicidal ideation compared to men.

The EMMY Project: Promoting mental wellbeing among the oldest old – The Finnish Case

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Background:

The European Welfare Models and Mental Wellbeing in Final Years of Life (EMMY, 2017-19) project covers interdisciplinary and mixed method studies on mental wellbeing among the oldest old in Finland, Italy, Norway and Spain. The overarching aim is to strengthen the understanding of how welfare models and related policies could be adapted to support mental wellbeing in the oldest old. Project results will be incorporated in a new tool for assessing the mental wellbeing impact of welfare policies.

Methods:

23 focus group interviews were conducted, including 117 participants aged 80 years or older. Six of these were conducted in Finland (N = 28) and the data was analysed using qualitative content analysis. In a policy analysis, relevant national legislation, plans and programmes were identified from the four countries. Five key stakeholders in each country validated the identified policies in interviews. The policy items were systematically coded (N = 42 in Finland), focusing on their correspondence with older adults' own views on their mental wellbeing and its protective factors.

Results:

The findings highlight that although functional status undeniably plays an important role for experienced wellbeing in general, it is not the principal component of the experienced mental wellbeing among the oldest-old. The Finnish policy case pinpoints both promising policy examples, but also development needs such as the inclusion of issues related to e.g. digitalization and social challenges including loneliness.

Conclusions:

These findings have significant multi-level implications, showcasing the importance of coordinated actions at societal and individual levels alike. Actions to enhance social participation, especially for individuals with reduced social networks are needed, as well as a more holistic approach in general considering the multi-dimensional nature of experienced mental wellbeing in later life.

Key messages:

- Results support the exchange of good policies between EU Member States to incorporate a change of focus from mental disorders to mental wellbeing among older people and its protective factors.
- Country-specific case studies highlight the relevance of context,pinpointing the various pathways to increased mental wellbeing that could be translated into policy.

Assessment of Cognitive Reserve: a pilot study for Bulgarian Population

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Background:

The Cognitive Reserve (CR) is a concept used to represent the individual differences in processing cognitive tasks, allowing to cope with the pathology of the brain. CR describes the individual brain potential as a result of various activities during the lifespan. The study of this construct could open one more "door" on the path to the prevention of diseases associated with cognitive dysfunctions in human aging. The objective of this pilot study was to assess the CR as a part of a project aimed to evaluate the effectiveness of various options for stimulating active aging.

Methods:

The Cognitive Reserve Index Questionnaire (CRIq) was translated into Bulgarian and was administered to 114 healthy participants (84,2% female and 15,8% male), aged 23 to 84 years (M = 52,40 SD = 16.81), divided into three age groups (up to 44, 45- 69 and over 70 years old). An individual CRI-level was calculated based on the subscores for education, working activity and leisure time. Non-parametric tests (Chi-square, Mann-Whitney U-test, and Kruskal-Wallis test) were used for statistical analysis.

Findings:

The CRI-level depends significantly on age ($\chi^2 = 31.834$, (df = 6), $p < 0.001$) but does not depend on gender ($p = 0.257$). Significant difference was found in three age groups for the total CRI-score ($p < 0.001$), CRI-Education ($p < 0.001$) and CRI-WorkingActivity ($p < 0.001$) except for CRI-LeisureTime score ($p = 0.547$). The total CRI-score significantly correlate with CRI-Education ($r = 0.863$), CRI-WorkingActivity ($r = 0.809$) and CRI-LeasureTime ($r = 0.414$).

Key messages:

- The CRIq is an easy to administer instrument that could help the assessment of the cognitive reserve in Bulgarian population.
- The cognitive reserve depends on human behavior through the life span and this fact gives new opportunities for prevention of diseases associated with cognitive dysfunctions in human aging.

Psychosocial distress and cardiovascular disease

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Background:

The contemporary increase in psychological distress observed in many countries is, by itself, a public health issue of great concern.

Methods:

This prospective study aims to investigate the impact of psychological distress on incident cardiovascular disease, in different age groups and also with respect to sex, among participants in the Gothenburg-based InterGene Study cohort. This cohort comprises a total of 3614 men and women, aged 25-75 years. Included in the present study were individuals who were free of previous CVD diagnoses and who fully completed all baseline examinations. Inclusions took place during 2001-2004. Psychological distress at baseline was assessed by self-rating depression and anxiety scales. A wide range of physiological and behavioral parameters were also assessed, which allowed for relevant adjustments. The outcome was incident CVD, and with a 12 year follow-up. Cox-regression analyses were performed.

Results:

The results showed an increased risk of incident CVD with higher scores on each of the scales. The majority of the findings persisted after adjustments for relevant confounders. It was most common for young women to score high on the anxiety and depression scales.

Conclusions:

The associations between psychological distress and later life cardiovascular disease calls for enhanced public health measures aiming at ameliorating psychological health, not least in younger age groups.

Key messages:

- There was an increased risk of incident CVD with higher scores on psychosocial distress scales.
- The majority of the findings persisted after adjustments for relevant confounders.

Evaluation of Social Media Use Disorder in Medical Faculty Students

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Background:

Recently, social media usage disorder has become a behavioral addiction with the internet which has entered our daily life rapidly. One of the important factors considered to be associated with social media use disorder is thought to be loneliness. The aim of the study was to evaluate the social media use disorder in medical school students.

Methods:

This study is a cross-sectional study conducted on the students who were studying in Eskisehir Osmangazi University Faculty of Medicine between January 2 and February 28, 2019. The study group consisted of 422 internet user students. The level of social media usage was assessed by Social Media Disorder Scale (SMD-scale). The level of loneliness was evaluated with the short-form of the UCLA Loneliness Scale (ULS-8). Mann Whitney U, Kruskal Wallis, Spearman correlation analysis were used.

Results:

Of the participants 226 (53.6%) was male. The age of the study group ranged from 17 to 29 years and the mean (SD) was 19.78 (1.33) years. The scores obtained from SMD-scale ranged from 0 to 63, with a mean of 12.18±10.35 (median = 9.0). All students had at least one social media account. In the study, no difference was found between the scores obtained from gender, age group, father's education status, family income status and family type. While the scores of the students whose mothers have a university education level are lower; those who spent more than 2 hours a day on social media had a higher score. There was a weak positive correlation between the scores obtained from SMD-scale and ULS-8 ($p < 0.001$, $r = 0.215$). There was a weak negative correlation between the scores obtained from the SMD-scale and the academic grade point average ($p = 0.012$, $r = -0.123$).

Conclusions:

It is concluded that the correct use of social media can be increased by informing about this issue. Increasing platforms such as student clubs in which individuals could socialize in real life may be useful in reducing this disorder.

Key messages:

- Public health studies could help prevent social media use disorder transform into more serious health problem in future.
- Further studies are needed to determine the effects of social media use disorders on mental and physical health.

Interventions to reduce stress, anxiety and depression symptoms in teenagers – a systematic review

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Introduction:

Stress, anxiety and depression symptoms are frequent in teenagers. Objectives: To identify the interventions effectively able to prevent or reduce anxiety, depression and psychological stress in adolescents; to assess the effectiveness, feasibility and transferability of the interventions.

Methods:

Comprehensive systematic review was performed. Three steps searching strategy using the databases: PsycINFO, PubMed, SCOPUS, Cochrane Library, and Google Scholar identified 679 studies and reviews. Critical appraisal was performed by 2 reviewers, data extraction performed on finally selected 59 reviews, RCT, cohort studies focused on sample size, geographical context, setting, description of intervention, measures of primary and secondary outcomes.

Results:

The considered interventions are: Internet-based multifaceted cognitive bias modification training (CBM), Internet (iCBT) or school-based cognitive behavioral group training (CBT), Social skills training (SST), Metacognitive therapy, Psychosocial Support Intervention, organized sports participation and voluntary outdoor play, school-based resilience-focused intervention, assertiveness group training, short-term psychoanalytic psychotherapy (STPP), brief psychosocial intervention (BPI), Guided Parent-Delivered Cognitive Behaviour Therapy (GPD-CBT), Internet-based self-support method.

Conclusions:

Interventions for promoting mental health in adolescents have to combine parenting programs with leisure activities and balanced curriculum; various approaches (physical activity, music, sports participation) should be tailored into the national, community and school contexts. Resilience factors (relationship with parents, communications with peers), development of help-seeking behaviours and available self-help programs could support early detection and assistance. Most interventions showed positive effects on short and medium term and potential transferability.

Key messages:

- Regular screening for childhood adversities and traumas and screening of symptoms as feeling sad, hopeless, worried should be performed in adolescents as they get older.
- Besides mental health risk factors, interventions should target developmental risk factors in transitional stages from childhood to adolescence and from adolescence to young adulthood.

The neighborhood age structure and mental health

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Background:

Against the background of urbanization and aging and the aim to design age-friendly cities, it is crucially important to understand whether and why older adults' health may benefit from being surrounded by older peers mainly, or by residents from all ages. We assessed the association between neighborhood age structure and mental health and the mediating role of social neighborhood perceptions.

Methods:

Survey data were obtained from 1255 older adults aged 65 years and over, participating in the Dutch GLOBE study. The neighborhood age structure, measured in 2011, was defined as the Herfindahl-Hirschman index to assess homogeneity in the age composition (range from 0-100, a higher score indicating more homogeneity) and percentages of different age groups in a neighborhood. Mental health was measured in 2014 by the Mental Health Inventory-5 score, ranging from 0 to 100, where a higher score indicates better mental health. Perceptions of neighborhood social cohesion, feeling at home in a neighborhood, and social participation was assessed in 2011. Linear regression models were used to assess the association of neighborhood age composition with mental health. Causal mediation analysis was used to assess the potential mediating role of social neighborhood perceptions.

Results:

A more homogeneous neighborhood age structure was associated with better mental health status. Feeling at home in a neighborhood partly mediated the association, whereas social cohesion and social participation did not mediate the association. While a higher percentage of children in the neighborhood was associated with better mental health, a higher percentage of elderly in the neighborhood was associated with lower mental health status.

Conclusions:

The neighborhood age composition is a promising, but currently insufficiently understood, entry point for policies addressing the challenge of growing urban and aging European cities.

Key messages:

- The neighborhood age composition is a promising, but currently insufficiently understood, entry point for policies addressing the challenge of growing urban and aging European cities.
- Feeling at home in a neighborhood partly mediated the association between neighborhood age structure and mental health; social cohesion and social participation did not mediate the association.

The impact of the economic crisis on the mental health of Portuguese primary-school children

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Objective:

To measure the impact of the economic crisis on the mental health correlates of Portuguese children attending primary school during 2016.

Methods:

Cross-sectional analysis of primary school-aged children and their parents ($n = 1157$), conducted in public and private schools of three Portuguese districts. Parent reports of children mental health symptoms (Strengths and Difficulties Questionnaire - SDQ) and children self-reports of health-related quality of life (KIDSCREEN-27) and depressive, anxiety and stress symptoms (Depression, Anxiety and Stress Scales, Children version - DASS-C), were compared according to a set of yes/no questions on how the economic crisis changed the normal aspects of routine life (e.g. During the financial crisis did you had to use savings? Started buying cheaper food?). Linear regression models were fitted for the SDQ, the KIDSCREEN-27 and the DASS-C as dependent variables adjusted for children sex, socioeconomic status and district of residence.

Results:

Affirmative answers to the crisis impact questions were associated with more frequent psychosocial functioning problems in children, with poorer self-reported health-related quality of life and with more frequent symptoms of depression, anxiety and stress.

Conclusions:

Portuguese children mental health correlates show significant worse scores for those whose parents declared having to change daily routine habits as a result of the recent macroeconomic financial crisis, compared to those who did not change habits. Public Health programs should be developed to mitigate the potential negative impact of the financial crisis to the mental health of children.

Key messages:

- A negative impact on children mental health was observed as a result of the economic crisis.
- Public health programs designed to mitigate the impact of the economic crisis should include primary-school aged children.

Association among defense mechanisms, causes of procrastination and well- being; Gender differences

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Background:

Defense mechanisms have been a central concept in the field of mental health and psychotherapy. Recently, there has been some research interest in defence mechanisms in empirical psychology. Causes of procrastination are shown to be related to defence mechanisms in terms of students' dilatory behaviour. Furthermore, the causes of procrastination seem to affect students' well-being. The aim of the present study is to investigate the effect of defence mechanisms and causes of procrastination on well-being, separately for each gender.

Methods:

A cross-sectional study was conducted in Greece with 628 college students at the University of Ioannina (490 females and 138 males). Specially designed and validated instruments were used to record students' sociodemographic characteristics, defence mechanisms (DM), causes of procrastination (CP) and well-being (WB). Analysis of Variance (ANOVA) and Covariance (ANCOVA) was used to investigate the effect of DM and CP on students' WB separately for each gender.

Results:

Students' defence mechanisms and causes of procrastination had a statistically significant effect on their well-being. More specifically, female students with a lower percentage of fear of success/ influence of peers ($p < 0.001$) and maladaptive defense style ($p < 0.001$) as well as those with higher image-distorting ($p < 0.001$), self-sacrificing ($p = 0.004$) and adaptive defense styles ($p < 0.001$) seemed to have a significantly higher percentage of well-being. On the other hand, male students with a lower percentage of lack of duty/ tolerance of frustration ($p = 0.039$) and maladaptive style ($p < 0.001$) but a higher percentage of image distorting ($p < 0.001$) and adaptive defence styles ($p < 0.001$) had a significantly higher percentage of well-being.

Conclusions:

Students' causes of academic procrastination in the combination with the use of defence mechanisms significantly affect their well-being despite, being differentiated according to their gender.

Key messages:

- Defense mechanisms play a crucial role in students' adaptation at the university as well as in their mental health.
- Emphasis should be given on the design of intervention on students' procrastination involving non-conscious processes and more structural elements of personality.

Effectiveness of the Children of Divorce Intervention Program in the Netherlands

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Background:

Many children experience parental separation and divorce. This experience is likely to negatively affect their wellbeing, conduct, psychological adjustment and social relations. Prevention of these problems thus has major priority but effective intervention programmes are still rare. This study therefore aimed to assess the effects of a 12-session preventive group intervention "Dappere Dinos^{TM}" for 6 to 8 year old children.

Methods:

We performed a quasi-experimental study (registered as NTR 6788) on 105 children participating in the intervention group, 37 children with separated parents not participating ('divorce controls') and 138 children from intact families ('intact controls'). Outcomes regarded children's positive functioning (Parent Evaluation Form; Pedro-Carroll & Cowen, 1989), emotional and behavioral problems (Strengths and Difficulties Questionnaire; Goodman, 1997), and wellbeing (Cantril ladder, Cantril, 1965).

Results:

Analyses showed that children's positive functioning after participating in Dappere Dino's increased according to mothers (MΔpre-post(SD) = 0.26 (0.32); $p < .001$). Also, children's overall emotional and behavioral problems decreased after participation (MΔpre-post_mother(SD) = -2.02 (4.55); $p < .01$; MΔpre-post_trainer(SD) = -1.07 (4.34); $p < .05$; MΔpre-post_teacher(SD) = -1.64 (3.54); $p < .01$). Children's wellbeing increased after participation (MΔpre-post_mother(SD) = 0.77 (1.02); $p < .001$; MΔpre-post_trainer(SD) = 0.69 (0.94); $p < .001$), or stayed the same (MΔpre-post_teacher(SD) = 0.19 (1.03); p = n.s.). No such changes were found in the two comparison groups.

Conclusions:

After parental divorce, a 12-session preventive group intervention Dappere Dino's^{TM} for 6- to 8-year-olds can be efficacious in promoting children's emotional well-being and positive functioning, and reducing their emotional and behavioral problems.

Key messages:

- Given the high prevalence of divorce and the potential risk for child well-being and functioning, prevention of problems for these children and helping them adapt to the divorce are major priorities.
- After parental divorce, preventive group support can be efficacious in promoting children's emotional well-being and positive functioning, and reducing their emotional and behavioral problems.

Socioeconomic differences in the adolescent mental health time trend: what do we refer to?

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Background:

The long-term increase in adolescent internalizing mental health problems in many countries has raised the question of potential socioeconomic status (SES) differences in this trend. Inconsistencies in how SES and mental health are operationalized hamper this question to be addressed. We examined variation in the adolescent mental health trend across different SES groups using different ways of operationalizing SES and mental health.

Methods:

We used six waves (1993-2013) of Swedish data from the Health Behaviour of School-aged Children (HBSC) study, an international repeated cross-sectional study. We used three proxy indicators of SES: an objective measure and two subjective measures (adolescents' perceptions of their own and their family's economic situation). The mental health indicator was psychosomatic symptoms. For each SES indicator, we analyzed the mental health trend using two standards of dividing SES subgroups (absolute vs. relative standard) and mental health (mean vs. top 90% cut-off score).

Results:

The long-term trend of adolescent mental health varied by the SES indicator used. The objective SES measure did not differentiate mental health across different SES groups and the subjective measure of adolescents' own economic situation did so in terms of the level but not the trend. The subjective measure of the family's economic situation revealed SES gaps in mental health in terms of both the level and the trend.

Conclusions:

Adolescents' perceptions of their family's economic situation has a greater discriminant value than the other SES measures to identify SES gaps in mental health in Sweden. Thus, the trend in adolescent mental health across different SES groups varies depending on how SES and mental health are operationalized. We call for efforts in other countries to report trends with varying measures of SES and mental health. This will help identify vulnerable groups in each country and facilitate well-informed international comparisons.

Key messages:

- This study shows that the long-term trend in adolescent mental health according to one's SES may meaningfully differ depending on how SES and mental health are operationalized.
- This study calls for future studies in other countries for a more precise identification of vulnerable groups and for a facilitation of well-informed international comparison.

Determination of mental status of the university students and related risk factors

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University time is one of the most challenging periods of a person's life. It's also peak period of many mental illnesses. Mental disorders are the most important cause of disability in people aged 10-24 and contribute to 45% of the disease burden. The aim of this study is to determine the frequency of mental illness of university students in the research population and to assess the possible risk factors.

This study is a cross-sectional study. 345 students systematically selected by population weighting method were included in the study. Dependent variable of the study is depression, generalized anxiety, bipolar disorder and presence of psychotic symptoms. Mental disorders were evaluated using the CIDI and the DSM-5 Oriented Diagnostic Interview Form. 30.1% of the students had depression, 25.2% had generalized anxiety disorder, 9% had bipolar disorder and 2.9% had psychotic symptoms. The mean age of the participants is 20.4 ± 1.6. According to the binary logistic regression analysis, mother with mental problems, sexual abuse, person with special needs in family, pessimistic personality were found as risk factors for depression. Female gender, stay in a dormitory, poor economic condition of the family, mother with mental problems, alcohol/substance use of parent, pessimistic personality, lack of confidence were risk factors for generalized anxiety disorder. Alcohol use was risk factor for bipolar disorder. Poor academic achievement, having the family excluded by society were risk factors for psychotic symptoms. Average income level was a protective factor for bipolar disorder. Approximately one out of every 3 students use alcohol, and one out of every 20 students found to be at risk by using drugs.

The incidence of mental disorders in university students is high. Many factors play a role in the emergence of mental problems. Early recognition of mental disorders, effective control and intervention studies are highly valuable in universities.

Key messages:

- The social negative attitude developed against psychiatric diseases and patients has a direct effect on the prevention, early recognition and treatment of mental disorders.
- University students should be seen as a risky group for substance use, policies should be developed to prevent substance use at universities immediately.

Mental health problems and support needs of PhD students: bottle necks of the phD trajectory

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Background:

A substantial part of PhD students is struggling with mental health problems. These complaints can lead to dropping out and societal costs. Various bottlenecks that students may face during the PhD process can undermine mental health. We aim to test what bottlenecks are predictive of mental health problems. Furthermore, we aim to address the responsibility of the University.

Methods:

In a cross-sectional survey design (N = 427), both mental health status, and possible bottlenecks of the PhD trajectory were studied amongst PhD students at the University of Amsterdam. Mean age was 29 years; 29% was male; 71% female. Participants were recruited through emails and newsletters (response rate 14%). Regression analysis' were performed with depression and anxiety as dependents (k6, ek10). We controlled for gender, age, international PhD student yes/no.

Results:

PhD students that score higher on anxiety, are more often international students (β=.09; p<.05), score significantly higher on negative work home interference (β=.46; p<.001), and on negative home work interference (β=.12; p<.01), score significantly lower on social support (β=.19; p<.001) and on self-efficacy (β=-.18; p<.001). [F(15, 413) = 20.00; p = .000]. PhD students that score higher on depression score significantly higher on negative work home interference (β=-.54; p<.001), and on negative home work interference (β=-.07; p<.05), score significantly lower on social support (β=-.23; p<.001) and on self-efficacy (β=.03; p<.001). [F(15, 416) = 41.68; p = .000].

Conclusions:

The bottlenecks that we found to be predictive of a worse mental health status can be addressed in the university context through providing information to PhD students, PhD supervisors and PhD student counselors. Extra attention needs to be paid to international PhD students. The University could offer interventions such as coaching, career guidance, relaxation training, time management, intervision, and sports to meet support needs.

Key messages:

- Work home interference, home work interference, social support and self-efficacy are important aspects of mental health in PhD students. Extra attention needs to be paid to international PhD students.
- The University has a responsibility and an interest regarding its PhD students' mental health and wellbeing: appropriate interventions can be deployed for the support needs of PhD students.

Healthcare use prior to suicide in the Stockholm County population 2011-2016

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Background:

Suicide is a major public health problem. A detailed description of healthcare use prior to suicide can serve to improve prevention strategies. The aim of the study was to describe the patterns of primary, specialized outpatient, and inpatient healthcare use from two weeks and up to one year prior to suicide in Stockholm County.

Methods:

The study population included all 15 year or older suicide victims who died in Stockholm County 2011-2016 (n = 1950) identified through National Cause of Death Registry. Data on number of visits and contacts with healthcare among suicide victims were obtained from VAL healthcare use registry in Stockholm County. Healthcare use was depicted from one year to up to two weeks prior to suicide death.

Results:

Preliminary results showed that there were 65% and 57% of women and men, respectively, who had at least one contact with healthcare during the last two weeks before suicide death. Measured one year prior to suicide, there were 93% of women and 85% of men who had at least one contact with healthcare. Among those who had at least one contact with healthcare two weeks prior to suicide, there were 16% of women and 12% of men who were hospitalized, 55% of women and 47% of men who had a contact with specialized outpatient care, and 32% of women and 27% of men who had a contact with primary healthcare. The proportion of those who did not have any contact with healthcare during the six months prior to suicide decreased gradually with increasing age among men (23% at ages of 15-24 years old and 7% at ages of 65 and older). There were on average 7% of women in all age groups who did not have any contact with healthcare during the six months prior to suicide.

Conclusions:

The majority of the suicide victims had a contact with healthcare during the last year prior to suicide death. The findings suggest that suicide prevention efforts may target improved tools for clinically-based risk assessment.

Key messages:

- The majority of the suicide victims had at least one contact with healthcare during the last year prior to suicide death.
- Those who did not have any contact with healthcare during six months prior to suicide were more likely to be young men.

Childhood adversities and related mental health among children in socialization centers

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Background:

Life course paradigm provides a comprehensive overview of different determinants and mental health outcomes during the life course. Childhood adversities experienced in early adulthood are related to poor mental and physical health in the future. The aim of the study was to identify relations between experienced childhood adversities and mental health outcomes among children in socialization centers and regional high schools (HS) in Lithuania.

Methods:

A prevalence study was conducted in all 3 socialization centers (SC) in Lithuania (n = 35) and two regional high schools (n = 96) among 13-18 year old's. Anonymous individual interviews were conducted in 2018. Descriptive statistics using SPSS was applied for assessment of adverse life events, mental health risk factors and outcomes (%). Pearson chi square, Fisher test, Kruskal - Wallis H were applied for comparison and statistical significance ($p \leq 0{,}05$).

Results:

Prevalence of bullying among children in SC was 77.1% (47.9% among HS children), parental divorce - 60% (27% HS), parental criminal behavior - 40 % (2.1% HS), family violence - 48.6% (16.7% HS), physical abuse - 62.9% (9.4% HS), parental alcohol use - 40% (13.5% HS). 74.3% among children in SC experienced neglect, physical traumas (39.6% HS), prevalence of suicidal behavior was 25.7% and 6.25% accordingly. Criminal behavior, alcohol, substance abuse and smoking were much more prevalent among children in socialization centers than among high school children ($p < 0.01$).

Conclusions:

Children in socialization centers had higher exposure of childhood adversities and poorer mental health outcomes. High prevalence of adversities was related to poor parenting skills as well as toxic family and social environment.

Key messages:

- Childhood adversities experienced in early adulthood are related to poor mental and physical health as well as deprivation of social performance in later life.
- Childhood adversities are more prevalent among children in socialization centres than in regional high schools.

Benefits of non-drug interventions for people with suicidal crises in unipolar depression

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Background:

Depression is one of the most common and serious diseases worldwide: According to WHO, more than 300 million people worldwide were affected by depression in 2015. In this group, the suicide rate is about 20 times higher than the population average. In Germany, around 10,000 people take their lives each year, many of them suffering from depression. The Institute for Quality and Efficiency in Health Care commissioned the Department of Health Care Management at the Berlin University of Technology to conduct a Health Technology Assessment on whether non-drug interventions influence coping with suicidal crises in unipolar depression.

Methods:

A systematic search of primary studies and systematic reviews (e.g., in MEDLINE, PSYCINFO) was performed to assess the benefit of ambulatory crisis intervention programmes or psychosocial interventions compared to another non-drug treatment, drug treatment, inpatient treatment or no treatment/waiting list in adult suicidal patients with unipolar depression regarding patient-relevant outcomes (e.g., suicide attempts, suicidal ideation, depression).

Results:

The search yielded a total of 4,159 hits. After two rounds of screening for relevance and removing duplicates, 4 studies remained for inclusion in the qualitative and quantitative analysis. The studies present RCTs assessing the effects of cognitive behavioural therapy (CBT) of the 2. and 3. wave - all short-term programmes focussing on suicidality. Results indicate a benefit of CBT compared to standard treatment, depending on the outcome, on the "wave" and on the time of follow up assessment.

Conclusions:

There is some evidence on benefits of CBT for adult patients with suicidal crises in unipolar depression. However, the quality of the included RCTs is weak and evidence on benefits of other non-drug interventions in outpatient care is missing. Further research is needed to identify effective interventions, especially for the vulnerable weeks immediately after suicide attempt.

Key messages:

- Short term cognitive behavioural therapy with suicidal prevention elements may influence coping with suicidal crises in unipolar depression positively.
- Further research is needed to identify effective interventions for the vulnerable weeks immediately after suicide attempt.

Mental wellbeing among the oldest old, living in nursing home or at home

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Background:

People 80 plus are the fastest growing age-group in Europe. While research is focusing on health deficiencies and losses and need for medical care and follow up, life conditions and mental health of older people are fields with insufficient knowledge. The promotion, maintenance, and improvement of well-being in this group is a great public health concern. This study aimed to explore differences in perspectives of what contributes to mental wellbeing (MWB) within three groups of persons 80 plus: 1) living at home, 2) living at home and attending day center some weekdays, 3) living in nursing home.

Methods:

A qualitative approach was followed, with six focus groups - two in each of the three categories. 35 persons were recruited from senior community centers, adult day care centers, and nursing homes. Data was assessed using qualitative content analysis.

Results:

The preliminary results from our study show significant variations between the three groups of participants in their perspectives on what contributes to MWB for them. In group 1 and partly group 2, engagement in fruitful or inspiring activities and insightful experiences with friends strongly associated with MWB. While the relevance of these factors also was mentioned by participants in group 3, they at the same time pointed at the limitations of living in a nursing home. Staying healthy and maintaining independence positively contributed to MWB in all three groups, however highly relatively, based on the person's actual health situation. Having close relationships with family and friends were considered important in all three groups.

Conclusions:

Perspectives on what contributes to MWB among persons 80 plus varies a lot as they control for what is possible based on own health and functionality, but also on what is accessible depending on institutional limitations. While such conditions are partly accepted, there is a potential for better MWB, simply based on more and/or better initiatives.

Key messages:

- Perspectives on what contributes to mental wellbeing among the oldest old varies a lot based on health and functionality, and on what is possible and accessible within institutions for elderly.
- There is a potential for better mental wellbeing based on more and/or better initiatives.

Use of antidepressant medication in Côte d'Ivoire (2017-2018)

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Background:

Like industrialized countries, people in developing world are increasingly exposed to mental disorders. Antidepressant drugs play a major role in the treatment of these disorders. The objective of this study was to describe the use of these drugs in Côte d'Ivoire based on data from a mutual health insurance company.

Methods:

This is a retrospective analysis of the health care consumption data from the mutual insurance company for civil servants and agents of the State of Côte d'Ivoire (MUGEFCI). The sample consisted of members and beneficiaries aged twenty (20) years and over who had taken at least one antidepressant drug reimbursed by the mutual insurance company between January 1, 2017 and December 31, 2018. Consumption was described for each drug and expressed in defined daily doses (DDD)/1000 inhabitants/day.

Results:

The sample consisted of 5712 people aged 20 to 88 years with an average age of 50.61±12.02 years. There was a male predominance with a sex ratio of 1.10. The number of prevalent users was 3135 in 2017 and 2607 in 2018. The number of incident users in 2018 was 2013. 10871 'boxes' of antidepressant drugs were consumed during the study period (52.11% in 2017 and 47.89% in 2018). Amitriptyline (52.71 DDD/1000 inhabitants/day in 2017), fluoxetine (8.60 DDD/1000 inhabitants/day in 2017) and paroxetine (3.32 DDD/1000 inhabitants/day in 2017) were the most used drugs. Their consumption increased by 11.82%, 3.71% and 41.03% respectively in 2018. Venlafaxine (0.37 DDD/1000 inhabitants/day in 2017) was among the least used molecules. Its consumption fell by 52.53% in 2018.

Conclusions:

The overall trend was an increase in antidepressant use, with a significant proportion of new users.

Key messages:

- Depression is a public health problem that is still relevant in developing countries.
- Depression mainly affects young adults and can influence their productivity.

Sleep and Mental Health Among Older Adults in the Canadian Longitudinal Study on Aging

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Background:

Global studies have demonstrated consistent associations between sleep problems and mental health and well-being in older adults, however Canadian data are lacking. We investigated associations between sleep quantity and quality with both mental illness symptoms and well-being among older adults in Canada.

Methods:

We used cross-sectional baseline data from the Canadian Longitudinal Study on Aging, a national survey of 30,097 community-dwelling adults aged 45 years and older. Self-reported sleep measures included average past-week sleep duration (short [<6h], normal [6-8h], long [>8h]), and sleep quality (satisfied or dissatisfied vs neutral). Mental illness outcomes included depressive symptoms and psychological distress. Mental well-being outcomes included self-rated mental health and satisfaction with life. We used modified Poisson regression models with adjustment for sociodemographic, behavioural, and clinical factors, and stratification by sex and age to explore effect modification.

Results:

In the unadjusted analysis, short and long sleep duration and sleep dissatisfaction were associated with higher mental illness symptoms and lower well-being across all outcomes. Sleep satisfaction was associated with a lower likelihood of mental illness symptoms and better well-being. Short sleep duration was associated with the largest effects on mental health outcomes. Self-rated mental health and depressive symptoms had the largest associations with sleep measures. Effects were larger in males and the 45 to 54 year age group.

Conclusions:

Preliminary evidence suggests sleep duration and quality are associated with symptoms of depression, psychological distress, and poor mental well-being among older adults. We are unable to determine whether sleep problems are a cause or consequence of poor mental health. Nonetheless, sleep may be an important target for public health initiatives to improve mental health and well-being among older adults.

Key messages:

- Our findings contribute further evidence that sleep difficulties are associated with adverse health outcomes including higher mental illness symptoms and lower well-being among older adults.
- Sleep disturbances are an unmet public health problem, and may be an important target for public health initiatives to improve mental health and well-being among older adults.

Suicide in Polish migrants to Scotland

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Background and Methods:

Suicide amongst the 91,000 Polish nationals living in Scotland has been identified as a concern by the Polish Consulate. The adult suicide rate in Poland is 20.8 / 100,000 EASR population (Eurostat Suicide and Undetermined combined 2012-15). This is significantly higher than the 2012-16 Scottish level of 14.1 / 100,000 National Records of Scotland (NRS).

We set out to establish the picture for Polish migrants in Scotland and for 2012-16:

1. ascertained the number of such deaths from National Records of Scotland (NRS) describing the epidemiological features; and
2. reviewed Crown Office files of each person - extracting key information from police and pathology reports.

Results There were 68 suicide deaths in the 60 months. We estimated the European age standardised suicide rate (EASR) for all Polish residents in Scotland as 21.6 / 100,000 (95% CI 13.4 - 31.4) a suicide rate consistent with Poland not Scotland. The male:female ratio of 5.8:1 also mirrors Poland (vs. Scotland's 3:1 ratio). Polish men have a significantly higher rate than Scottish men - 31.5 vs 19.4 / 100,000. The suicide rates of Polish and Scottish women are very similar (5.4 vs 7.3 / 100,000 respectively).

Crown Office Records

A key finding is how similar the circumstances surrounding suicide deaths in both Polish and Scottish people are. In particular unemployment /irregular work, shift and manual work, relationship problems and alcohol use are all common. For Polish people in Scotland the challenges and stresses of the 'migrant experience' are superimposed onto other life events. Difficulties working in an English-speaking environment (and being unable to discuss emotional health), not knowing about the NHS Scottish public services and the lack of family and community networks to offer social support are all common.

Conclusions:

Actions are at four levels:

- National- the suicide action plan
- Employers
- NHS - staff awareness and monitoring trends
- Polish community groups

Key messages:

- Polish migrants to Scotland have a much higher rate of suicide than Scottish people - consistent with that in Poland.
- Addressing suicide requires examining factors in migrant and ethnic minority groups.

Gender differences in depression across Europe: a systematic review of cross-national studies

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Background:

Across countries and cultures, depressive disorders are more common among females than among males; however, the magnitude of gender differences varies between populations and may be a result of different country-specific social policies and cultural factors. This systematic review seeks to synthesise evidence from nationally representative, cross-national studies across Europe (EU-28 plus Switzerland and Norway) and to describe the impact of country-specific factors on gender differences in depression.

Methods:

PubMed, Web of Science, PsycInfo, and Embase were searched through March 2019 for peer-reviewed, nationally representative studies that included at least two European countries, used structured assessment for depressive disorders or symptoms, and reported or allowed for the calculation of gender ratios or differences. No restrictions on language or publication date were applied. Risk of bias was assessed using a tool specifically designed for population-based prevalence studies.

Results:

Twenty-one studies were included in this review, ten of which were based on surveys limited to older populations. Despite the use of different analytical approaches, metrics, scales, and cut-off points, depressive disorders were more common among females than among males in all but a few instances, with substantial variation in the magnitude of gender differences between countries and across studies. There is evidence of smaller gender differences in Northern Europe and greater gender gaps in Southern and Eastern Europe, as well as among older populations.

Conclusions:

Despite methodological heterogeneity between studies, there is evidence that gender differences in depression vary substantially across Europe. These differences may be associated with welfare state regimes and appear to be less pronounced in younger cohorts. Further cross-national research on gender disparities in depression between age groups, birth cohorts, and ethnic subpopulations is warranted.

Key messages:

- While depressive disorders are more prevalent among females than among males in virtually all of Europe, the magnitude of gender differences varies substantially between countries.
- There is some evidence that gender differences in depressive disorders are greater in countries with weaker welfare states and lower macro-level gender equality, as well as among older populations.

Farmers' health and wellbeing in the context of changing farming practice: a qualitative study

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Background:

Farming continues to change globally, with steady industrialization, globalization and climate change and disproportionately high reports of stress and suicide. Little research has been done to understand how changes to farming impact mental health. We aimed to understand how Canadian farmers understand their stressors and experience their health.

Methods:

We recruited 16 small-medium scale, diversified farmers through farm organizations in Grey-Bruce counties in Canada. We interviewed them about their perception of changes in farming, associated stressors, mental health and well-being, and community supports. Using a constructivist paradigm, we coded each interview, discussed results, and formulated emergent themes using thematic analysis.

Results:

Farmers' relationship to change was complex with both benefits and challenges of changing farm practices, technology and weather for health - a ''double-edged sword''. Farmers described the resilience associated with farming which connects them to the land ''essentially being at one with place.'' Farmers' work required them to be active, an asset for keeping them healthy, but also a challenge if mobility became restricted. Farmers' noted overwhelming stress but stated ''...the last thing most farmers want to do is admit that they are stressed or have a mental health issue.'' Yet ''...if you don't have strong mental health then you can't really be resilient and cope with the stresses of climate change and all the things that will happen on a farm.'' They voiced a perceived lack of support from governments - dealing with bureaucracy, community - experience of isolation or stigma, and health services - an over-stretched, often distant system.

Conclusions:

Farmers' understandings from Canada will be compared to literature from Europe to demonstrate relevance inform public health programs promoting mental health in rural communities, advocacy for government supports to diversified farmers and evaluation of intervention programs.

Key messages:

- Farmers experience change as a double edged sword with benefits and challenges for health and mental health.
- Public health needs to intervene to meet farmers where they are and to advocate with farmers for further support.

Abortion and psychological distress in Icelandic women

Runar Vilhjalmsson

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Background:

Previous research into the psychological consequences of abortion has presented misleading results, as some studies suggest negative consequences and others do not.

The current study focuses on the relationship between having or not having an abortion and psychological distress in the form of depression, anxiety and anger.

Methods:

The study uses data from 792 female participants in a random national health survey of Icelandic adults, age 18-75. The survey was conducted in the Spring of 2015. Respondents were given the option of answering an anomymous study questionnaire via mail or online (response rate 58%). The questionnaire asked respondents about psychiatric and physical conditions requiring medical attention in the past 12 months, stressful life-events in the past 12 months, and ongoing life-strains. Female respondents were asked whether or not they had had an induced abortion in the past 12 months. Psychological distress during the past week was assessed with the depression, anxiety, and anger subscales of the SCL-90 checklist.

Results:

Women who had had an abortion (2% of female respondents) reported higher levels of anxiety, depression, and anger than other women. The differences were statistically significant when controlling for age, education, family income, previous psychiatric and physical conditions, and previous stressful life-events and life-strains.

Conclusions:

The study indicates that women who have had an abortion are worse off psychologically than other women, and the difference is only partially accounted for by previous mental and physical health, or previous stressful circumstances. Health services for women considering abortion should be carefully considered, psychological distress assessed, and ways explored to ameliorate the distress they may experience following the abortion.

Key messages:

- Abortion is related to higher levels of anxiety, depression and anger in Icelandic women.
- Health services for women considering abortion should be carefully considered and psychological distress assessed.

Physical education, leisure time physical activity, and psychological distress in adolescence

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Background:

Participation in physical education classes can positively affect mental and physical well-being in children and adolescets. The current study focused on the relationship between participation in gym and swimming classes and psychological distress symptoms in Icelandic adolescents.

Methods:

The analysis is based on a national school-based study, conducted in Iceland every fourth year, as part of the WHO collaborative cross-national survey titled Health Behavior in School-Aged Children (HBSC). Data collection took place between November 2013 and February 2014. Students filled out an anonymous study questionnaire in the classroom. The data is based on responses from 15 year old (10. grade) students attending the final year of compulsory school (N = 3618; response rate 81%).

Results:

Positive associations were observed between participation in curriculum-based gym and swimming classes and lower psychological distress symptoms. A closer multivariate path analysis suggested that beneficial effects of PE classes were direct, and also indirect because participation in such classes were positively related to leisure time physical activity.

Conclusions:

The study suggests that school-based physical activity enhances psychological well-being in adolescence. The benefits may be both direct and indirect through increased leisure time physical activity.

Key messages:

- School-based physical activity enhances psychological well-being in adolescence.
- The benefits may be both direct and indirect through increased leisure time physical activity.

Elderly drivers with dementia – how do experts and relatives assess their safety risk?

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Background:

Demographic change increases the proportion of car drivers over the age of 70. With increasing age, the likelihood of developing a form of dementia increases. In Germany, about 1.6 million people suffer from dementia. Surveys among dementia patients showed that about two-thirds said they held a valid driving licence and just under half reported still actively driving. We explored whether and to what extent motorists with dementia are putting road safety at risk and how relatives deal with the driving behaviour of their elders.

Methods:

Semi-structured qualitative interviews were conducted with seven experts from the fields of police, gerontology and geriatrics as well as with 16 relatives of patients with different stages of dementia. All interviews were then transcribed. The analyses based on the qualitative content analysis (Mayring 2015) with MAXQDA.

Results:

The experts regarded elderly drivers with dementia as a public health relevant safety risk. Among those elders who are affected by dementia the awareness of the problem often is limited and not rarely they are characterized by an unsafe driving style. Experts from Austria and Switzerland supported the concept of a mandatory dementia assessment for elderly drivers while experts from Germany did not. Relatives reported very similar descriptions of their elderly's driving characteristics. Furthermore, the cognitive and motor limitations associated with dementia often are not noticed by both patients themselves and their relatives.

Conclusions:

Representative studies are needed to test which measures, such as a mandatory dementia check from retirement age, are likely to improve the safety of older drivers with dementia. Family doctors and GPs should address and educate dementia patients in relation to their risk of accidents. Relatives should receive information material on how to communicate with their elderlys on this topic to maximize safety while avoiding conflict.

Key messages:

- The prevalence of elderly drivers with dementia is unknown.
- Representative studies are needed to test best practice appoaches for harm reduction in drivers with dementia.

DS Epidemiology, public health monitoring and reporting

Large sociodemographic differences in response rates and methods in a population survey in Sweden

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Background:

Declining response rates in population surveys may decrease the representativeness and introduce bias in survey results. This study investigated sociodemographic differences in response rates and methods in a population survey in Sweden.

Methods:

The study is based on a large population survey conducted in five counties in Mid-Sweden in 2017. Three age-specific questionnaires for persons 18-29, 30-69 and 70 years or older were designed to study living conditions, life style factors and health. The sample was random and stratified by gender, age group and municipality, and comprised 78 000 persons 18 years or older. Up to two reminders were sent, the last reminder consisted of a short version of the questionnaire. The survey could be answered using a written questionnaire or on-line. The web-questionnaire was available in Swedish and English.

Results:

The overall response rate was 44% with the lowest participation rate in ages 18-29 years (26%) and highest in ages 70-84 years (70%). Women, persons with high educational level, and persons born in Sweden were more prone to respond than others. Those aged 18-29 years were overrepresented in the sample and the participation rate would have been 46% if the sample had been unstratified by age. The majority of the respondents answered the written questionnaire, even though it was more common that younger people responded via the web compared to older people. In total, 8% of the respondents replied to the short form and this was most common (17%) among those born outside the Nordic countries.

Conclusions:

In line with previous research, the results indicate large sociodemographic differences in response rates. The response methods also vary between sociodemographic groups, and knowledge about these differences may be helpful when designing future population surveys.

Key messages:

- The response rate was higher among older people, women, persons with high educational level, and persons born in Sweden than among other groups.
- Persons born outside the Nordic countries were most prone to respond to the short form and younger people replied more often to the web-questionnaire than older people.

Added value of combining health examination surveys and human biomonitoring studies

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Background:

In many European countries, parallel to health examination surveys (HES), human biomonitoring (HBM) studies are conducted to monitor chemical exposures of the population. HES and HBM studies use survey based data collection with similarities in sample selection and recruitment, ethics and data protection, collection of data by questionnaire and through biological samples.

Methods:

In the framework of European Human Biomonitoring Initiative (HBM4EU), evaluation of opportunities and potential obstacles related to combining HES and HBM surveys has been conducted. Experiences and expectations of principal investigators (PI) of studies from 19 European countries have been evaluated.

Results:

The most common reasons for omitting an HBM module from a HES were lack of knowledge related to chemical measurements, lack of funding and capacities for chemical analysis. Many PIs feared that adding an HBM module to their survey would increase the participant burden and decrease participation rate. In surveys where these two different modules were already combined, the biggest benefits were seen on use of same infrastructure for recruitment of survey invitees, collection of questionnaire information and biological samples, and additional information on health, resulting more cost-effective data collection with more information on each participant. Combining these two modules had challenges on fitting together needs from the two study objectives. While survey content broadens, balancing participant burden and research interest of both HES and an HBM module is challenging. The amount of collected biological samples such as blood samples is limited. Coordination of the activities between several research groups can be challenging and time consuming.

Conclusions:

Several examples have shown that combining HBM and health surveys is possible and provide several benefits. However, it requires a good preparation and planning and sufficient coordination capacity to be successful.

Key messages:

- Combining HES and HBM is possible but requires detailed planning and good collaboration between research groups.
- Combined HES and HBM studies provide a wide range of information about population health status and its determinants as well as chemicals levels of exposure.

Comparison of the difference between income quintiles with the slope index of inequality

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Background:

The difference between income quintiles in health is relatively well accepted by the general public as a measure of health inequality. However, the slope index of inequality (SII) in health reflects the patterns of all social groups, including the middle 60%, and it could therefore be considered more academically desirable. If these two measures are closely correlated, the widespread use of the difference between income quintiles in health would be better supported. This study was conducted to compare differences between income quintiles in life expectancy (LE) and healthy life expectancy (HLE) with the SII.

Methods:

Data on LE and HLE by income quintile from all 252 subnational districts of Korea were obtained using the National Health Information Database of the National Health Insurance Service and the Korea Community Health Survey. The SII was estimated with linear regression analysis, and Pearson correlation coefficients between differences between income quintiles and the SII were computed.

Results:

The correlation coefficients between differences between income quintiles and the SII were generally high: 0.97 (95% CI: 0.96-0.98) for LE in men and women combined and 0.96 (95% CI: 0.94-0.97) for HLE in men and women combined. In most districts, the SII was greater than the difference between income quintiles.

Conclusions:

Differences between income quintiles were closely correlated with the SII. The widespread use of differences between income quintiles in health as a measure of health inequality may be preferable for communicating results of health inequality measurements to the public.

Key messages:

- Differences in life expectancy and health life expectancy between income quintiles were closely correlated with the slope index of inequality in life expectancy and healthy life expectancy.
- The widespread use of differences between income quintiles in health as a measure of health inequality may be preferable for communicating results of health inequality measurements to the public.

Does diet quality mediate socioeconomic differences in metabolic syndrome in the French West Indies?

Zoé Colombet

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Background:

Obesity and metabolic diseases represent a major health burden in the Caribbean, particularly since a large part of the population is disadvantaged. However, socioeconomic inequalities in chronic diseases are poorly explored in this region, and the contribution of diet to explain these inequalities has not yet been studied. We investigated the association between socioeconomic position and the prevalence of metabolic syndrome (MetS), and explored whether this association was mediated by diet quality in the French West Indies.

Methods:

This cross-sectional analysis included 1,144 adults ($\geq$16 y) from a multistage sampling survey, representative of the

Guadeloupean and Martinican population. The prevalence of MetS was assessed using the Joint Interim Statement. Dietary intakes were estimated using 24hours dietary recalls, and diet quality was assessed through the Diet Quality Index-International (DQI-I). Associations between socioeconomic indicators (education, employment, social assistance benefits) and prevalence of MetS, and the potential mediating effect of diet quality in this association were assessed using multivariable logistic regression models adjusted for sociodemographic factors.

Results:

MetS prevalence adjusted for age and sex was 21% and 30% among Guadeloupean and Martinican, respectively. Compared to those with a high education level, low- and middle-educated subjects were more likely to be at risk of MetS (OR = 1.9; 95%CI = [1.0-3.6] and OR = 2.7; 95%CI = [1.4-5.1], respectively), as were recipients of social assistance benefits compared to non-recipients (OR = 2.2; 95%CI = [1.1-4.2]). The DQI-I explained 11% of the overall variation in MetS due to education.

Conclusions:

Socioeconomic inequalities in MetS prevalence were found in a Caribbean population but diet quality contributed only to socioeconomic inequalities due to education. Future public health measures need to target specifically populations with limited financial resources and low education.

Key messages:

- Our work identified subgroups with higher risk of MetS, which is needed when implementing public health measures, particularly in this Caribbean population with of high poverty rates.
- Diet quality contributed only to socioeconomic inequalities due to education underlining that education may impact health through the ability to generate overall dietary behavior, long-term beneficial.

What can dietary patterns tell us about the Caribbean nutrition transition?

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Background:

Given the public health urgency facing the increasing rates of obesity and chronic diseases in the Caribbean, characterization of the nutrition transition and population groups at higher nutritional risk is needed. We identified dietary patterns in the French West Indies (FWI) and their association with individual characteristics.

Methods:

This cross-sectional analysis included 1,144 Guadeloupeans and Martinicans from a representative survey. To identify dietary patterns, principal component analysis was performed using 25 food groups, followed by a clustering procedure classifying subjects in independent clusters. Their associations with health status, Diet Quality Index-International (DQI-I), food supply behaviors, sociodemographic and economic characteristics were studied using multivariable models.

Results:

Four dietary patterns were identified, representing 25%, 24%, 31% and 20% of the sample: (1) a ''healthy'' cluster characterised by a high DQI-I, composed of high educated individuals; (2) a ''traditional'' cluster with a high DQI-I and high intakes of traditional dishes, formed mostly by women and older persons, with a high obesity prevalence (26%); (3) a ''western'' cluster with a low DQI-I, high intakes of sweetened beverages, snacks and fast foods, composed mainly of young subjects, buying their fruits, vegetables and tubers only or mainly in supermarkets; and (4) a ''transitional'' cluster with high intakes of bread, processed meat, sauces, alcoholic and sweetened beverages but conversely high intakes of tubers, legumes, fish and low intakes of biscuits and cakes, formed mainly by middle age men, self-employed or manual workers, and 35% had metabolic syndrome.

Conclusions:

The dietary patterns identified reflect different steps of dietary change as described by Popkin, suggesting an ongoing nutrition transition in the FWI. This characterization provides useful information for public health actions regarding population groups at higher nutritional risk.

Key messages:

- Four diversified dietary patterns were identified suggesting an ongoing nutrition transition in the French West Indies.
- Demographic and socioeconomic characteristics associated with dietary patterns, especially age, reflecting a generational contrast, provided needed information to guide future public health measures.

Factors associated with mechanical and systemic adverse events after colonoscopy (France, 2010-2015)

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Background:

More than one million colonoscopies are performed every year in France. They are associated with risks of mechanical and systemic serious adverse events (SAEs) which can be associated with patient, procedure, endoscopist, and facility characteristics. We tried to identify the factors associated with colonic perforation, gastrointestinal bleeding, splenic injury, shock, myocardial infarction, stroke, pulmonary embolism, acute renal failure, and urolithiasis after colonoscopy.

Methods:

We analysed data from the French national claims databases (SNDS). A total of 4,088,799 patients, 30 years or older, undergoing a first screening or diagnostic colonoscopy between 2010 and 2015 were identified. SAE rates were estimated, and risk factors associated with SAEs were identified using multilevel logistic regression models, adjusted for patient, colonoscopy, endoscopist, and facility characteristics.

Results:

Increasing age was associated with an increasing incidence of mechanical and systemic SAEs. Cancer and cardiovascular comorbidities were associated with mechanical SAEs, and a higher number of pre-existing conditions was associated with shock and acute renal failure. Polypectomy, especially of polyps larger than 1 cm, was associated with an increased risk of perforation (OR = 4.1; 95% CI, 3.4-5.0) and bleeding (OR = 13.3; 95% CI, 11.7-15.1). Mechanical SAEs were associated with the endoscopist's experience, while systemic SAEs were more frequent in public hospitals than in private clinics.

Conclusions:

SAEs related to colonoscopy were more frequent in older patients and in those with comorbidities. Mechanical SAEs were more frequent when colonoscopy was performed by less experienced endoscopists. Systemic SAEs were more frequent in public hospitals, reflecting patient selection processes. The risk of both mechanical and systemic SAEs should be taken into account when deciding to perform colonoscopy, particularly in older patients with multiple pre-existing conditions.

Key messages:

- Systemic SAEs are not uncommon after colonoscopy and, together with intestinal SAEs, should be considered when considering the need for colonoscopy.
- Patients at risk of SAEs should be identified and colonoscopy should be performed by experienced endoscopists in these patients. Less invasive alternatives should also be considered in these patients.

Determinants of self-rated general health among men and women 70 years or older in Sweden 2017

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Background:

Goal 3 of the 2030 Agenda for Sustainable Development states that ensuring healthy lives and promoting the well-being at all ages is essential. But health and well-being still vary between different groups. The aim of this study was to find factors associated with self-rated health that can explain the differences among people 70 years or older in Sweden.

Methods:

The study is based on a cross-sectional population survey conducted in five counties in Mid-Sweden in 2017. An age-specific questionnaire for persons 70 years or older was used. The response rate was 65% and the study population included 9 482 persons who answered all questions used in the study. Multivariate binomial logistic regression with outcome good or very good self-rated general health was used for the analysis.

Results:

The overall prevalence of good or very good self-rated health was 54%. The factors with the strongest positive associations with good/very good self-rated health were: good appetite (OR: 4.48; 95% CI: 3.41-5.88) and physical activity (2.07; 1.87-2.29). The strongest negative associations were found for: need for help in everyday life (0.37; 0.24-0.57), troubled by loneliness once a week or more often (0.40; 0.34-0.47), obesity (0.55; 0.48-0.63), troubled by loneliness some times a month (0.59; 0.50-0.71), sedentary 10 hours/day or more (0.61; 0.52-0.72), and being patronized (0.65; 0.55-0.76). Other statistically significant positive factors were e.g. to have someone to confide in, participation in activities with others, trust in people in general, feeling safe in residential neighbourhood and access to personal support. Included in the analysis, but not statistically significant, were sex, country of birth and care of relatives.

Conclusions:

Good self-rated health is more common among persons 70 years or older who have good appetite, are physically active and have good social relations.

Key messages:

- To promote good self-rated health in persons 70 years or older it is essential to enhance possibilities for social interaction and social support.
- Also promoting healthy lifestyle in form of physical activity and healthy eating habits is important.

An online health status report to support public health in Belgium

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Issue:

Monitoring population health is crucial for policymakers. In Belgium, health monitoring only existed at regional level, with no integrated view at country level.

Policy/tool:

The Health Status Report (HSR) project developed a tool for centralizing key health indicators. The HSR aims to support policymakers in multiple ways: as a 'warning signal', by contributing to the planning of health policies, and as an assessment tool for those policies. Rather than being exhaustive, the HSR selects key indicators to highlight important needs. These indicators have been identified through literature and consultations with experts and stakeholders. Topics include life and health expectancies, mortality, morbidity, and lifestyles, with an important focus on socio-economic inequalities. Good results and health gaps are underlined with international comparisons, trend analyses, and comparisons with reference values. By disaggregating the data by sex, age, geographic level or socio-economic level, specific health needs are identified.

Results:

The main outcome of the project is a continuously updated website: www.healthybelgium.be. The report highlighted that, although the Belgian health status is rather good, there is room for improvement: for some indicators Belgium lags behind other European countries; regional disparities remain important, with most indicators revealing a better health status in Flanders than in Brussels and Wallonia. Socioeconomic disparities also remain very important, and for some indicators even tend to worsen. Comparing the Belgian health status to that of the EU-15 results in more severe conclusions than in international reports.

Conclusions:

We developed a new tool to support public health policy in Belgium through benchmarking and trend and disparity analyses of several health indicators. The tool will be expanded in the next years, integrating for instance the results of the Belgian national burden of disease study.

Key messages:

- We developed an online health status monitoring tool to inform policymakers.
- The rather good health status hides important regional and socioeconomic disparities in Belgium.

Contamination of Poultry Meat with Salmonella infantis should be considered a Risk for Food Safety?

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Issue/problem:

EU Regulation regarding fresh poultry meat considers only S. enteritidis or S. typhimurium as Food Safety Criteria. On the contrary, the isolation of other Salmonella spp. in this food matrices is considered compliant. Several bibliographical sources indicate an increase in the isolation trend of S. infantis in the poultry industry and in derived products.

Description of the problem:

Episodes of food poisoning caused by fresh chicken meat contaminated with S. infantis have been recently reported. According to CDC, last year in USA, an outbreak caused by a S. infantis strain, resistant to multiple antibiotics, ended with 129 sick people, 25 hospitalizations and a death. National Salmonellosis Control Plan for Poultry 2019-21 establishes in Italy the abatement conditions for poultry farms in case of positive isolation of S. enteritidis, S. typhimurium and S. infantis.

Results:

In 2018, the National Health System disposed the analysis of batches of fresh chicken meat from Poland, sampled in a cold storage facility in Northern Italy. Food Control Dept. of IZSLER analysed 156 samples for a total of 780 sampling units (s.u.), for Salmonella spp.: 72 samples were positive (46,15%;corresponding to 222 s.u. - 28,46%). 42 strains were serotyped as S. enteritidis, 149 as S. infantis, 26 as S. newport, 4 as S. kentucky and 1 as S. mbandaka. According to EU Regulation, batches positive for S. enteritidis were indicated as not compliant, but batches positive to other Salmonella were considered regular.

Lessons:

EU legislation allows the circulation of chicken meat contaminated with S. infantis. Chicken meat should be consumed after appropriate well cooking eliminating this hazard, but it does not protect the consumer from the risk of cross-contamination of tools and surfaces at the household level. It's therefore fundamental the application of correct processing practices in order to prevent the spreading of Salmonella in home kitchens and limit dangerous episodes of infection.

Key messages:

- S. infantis trend of isolation in the poultry industry is increasing.
- application of GMPs in home cooking is fundamental to limit food outbreaks of infection.

Illicit drug use among Croatian university students

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Background:

Illicit drug (ID) use among university students has been recognized as a global public health issue in recent years. It has been emphasized that during university years' opportunities to experiment with ID increases due to the fact that this is a period of life characterized by transition, intense academic pressures as well as independence and separation from parental supervision. The aim of this study was to identify prevalence and characteristics of ID use among Croatian university students.

Methods:

This was a multicentric, cross-sectional study that included five Croatian universities. A validated, anonymous online questionnaire containing questions regarding demographic and data regarding ID, alcohol and tobacco use was self-administered to cross-faculty representative student sample of University of Osijek, Zagreb, Rijeka, Split and Zadar during November 2018.

Results:

The study sample included 888 students, the average age being 21.9 years (range 18-34); 18.4% males and 81.6% females. The overall prevalence of ID use among Croatian university students was 29.8%. The ID use was more frequent among males ($p = 0.001$) and among students who repeated the study year ($p < 0.001$). The study further revealed that there were 48.4% students who tried any type of ID during life. The majority of students tried ID for the first time during high school period (34.1%), when socializing with friends in open spaces such as parks (20.6%) and main reason for usage was to have fun (40.5%). The study also showed that there were statistically significant Spearman rank correlations between ID and alcohol use ($p < 0.001$) as well as between ID and tobacco use ($p < 0.001$).

Conclusions:

The usage of ID is highly prevalent among Croatian university students in participating universities. Further studies are needed to identify and explain other possible risk factors for this phenomenon.

Key messages:

- Illicit drug use is an important but poorly investigated public health issue among Croatian university students.
- Better understanding of specific characteristic and possible risk factor for illicit drug use among university student population will ensure development of preventive programs.

Validating record-linkage based methodology for addressing health survey non-participation

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Background:

As a consequence of declining levels of participation in health surveys, the results purported to be population-representative may be biased. Traditional adjustments for non-participation, such as weighting, can fail to correct for such biases. We aim to validate our developed methodology, which simulates non-participants, and compare results from the inferred sample to the 'gold standard' sample of participants and true non-participants, and participants alone.

Methods:

Participants and non-participants of the Finnish Health 2000 survey, and a contemporaneous population sample are available, with alcohol-related hospitalisations and deaths ("harms", individually record-linked for all Health 2000 invitees). Synthetic observations on non-participants were simulated through comparison of participants and population sample. Alcohol consumption of true and inferred non-participants were multiply imputed based on harms and education as well as age and sex, assuming data are Missing At Random (MAR). Results are compared via the relative differences (RD) between the inferred sample and 1) gold standard sample, and 2) participants alone.

Results:

Average weekly estimates for men are 129g in the inferred sample, and 130g in the gold standard (RD -1.2%, 95%CI -2.0, -0.4%), and 35g for women in both samples (RD -0.8%; -1.9, 0.3%). Estimates for men with secondary levels of education had the greatest RD (-1.9%; -3.3, -0.5%). Comparisons between the participants and the inferred sample revealed few differences.

Conclusions:

All RD between the inferred and gold standard samples lie within our ±5% acceptability limits, in support of the use of our methodology for adjusting for non-participation in health surveys. However, under MAR, there are no significant differences between the results generated from the inferred sample and the participants alone. Further work exploring Missing Not At Random scenarios is required to ensure utility for reliable population health monitoring.

Key messages:

- Survey weights alone cannot adjust for non-representativeness, but we have shown that data linkage can be used to match the characteristics and outcomes of the selected sample.
- Non-participation in health surveys may be adjusted for using our methodology, with further exploration into alternative missing data scenarios required.

Risk factors of addictive behavior in adolescents in Tunisia

Hela Ghali

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Background:

Adolescence is a period of physical, psychological and sociocultural transformation, but also of curiosity and experimentation. In Tunisia, the levels of use of some psychoactive substances, especially alcohol, tobacco and cannabis, remain high among adolescents, despite progress in regulatory efforts to limit access to these products by minors, and regular prevention campaigns. We aimed to determine the prevalence of addictive behavior among students in the region of Sousse and to specify the risk factors.

Materials/Methods:

We conducted a cross-sectional epidemiological study in two public schools in the governorate of Sousse during the 2017/2018 school year. All students in each class were included when they agreed to participate in the study. The data was collected by anonymous self-questionnaire, then processed and analyzed using the SPSS version 20 software.

Results:

In total, 294 students participated in this study with a mean age of 17.03 ± 1.51 years. A female predominance was noted (56.1%). The prevalence of addictive behavior was 52% (95% CI = [45.9% - 57.8%]). In univariate analysis, male gender, advanced age, and repeating the study year were significantly associated with addictive behavior (p = 0.014, p < 10-3, p = 0.004 respectively). However, multivariate analysis showed that the probability of addictive behavior decreased in students who read books frequently (OR = 0.6, 95% CI = [0.37 - 0.96], p = 0.03). The only independent risk factor associated with addictive behavior was age (OR = 1.34, 95% CI = [1.14 - 1.59], p < 10-3).

Conclusions:

The findings have implications for identifying protection factors and risk factors for addictive behaviors, and the development of primary prevention strategies derived from such factors.

Key messages:

- Our results highlight the need to better understand behaviors at risk in Tunisia and the perceptions of prevention policies among students.
- Knowledge of related factors is important for prevention program planning.

What do patients consulting in a free STI center know about HIV transmission and prevention?

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Background:

Despite therapeutic progress, HIV remains a public health issue with about 6400 new HIV contaminations each year in France. HIV prevention relies on health education, early screening, treatment as prevention, post and pre-exposure prophylaxis. Patients' visits to free sexually transmitted infections (STIs) screening centers (CeGIDD) are opportunities to spread prevention messages. This study aimed to assess level of HIV knowledge in a Parisian CeGIDD to improve prevention messages.

Methods:

The study included patients older than 18 who came for STIs testing between August 2017 and August 2018 and who understand written French language. Data were collected by a self-administered electronic questionnaire filled in before medical consultation. It included sociodemographic data and knowledge regarding HIV transmission and prevention.

Results:

The study included 2002 patients. The median age was 27 years and 66% were men. More than 96% of patients know that HIV transmission is possible through unprotected sexual intercourse and through needle exchange. However, some misconceptions persist: 20% of patients believe that HIV transmission is possible from using public toilets and 22% by mosquito bite. Prevention measures perceived as "absolutely or rather efficient" by patients were: using condom (97%), requesting a screening test from his partners (91%), getting screening tests regularly (90%), choosing his partners correctly (62%), having sex with few different partners (50%). Half of patients heard of post-exposure prophylaxis (51%).

Conclusions:

Main modes of HIV transmission are well known (unprotected intercourse and needle exchange). However, false beliefs regarding prevention may lead to risk behavior (doing screening test regularly doesn't protect against HIV) and need to be explored. Moreover, assessment of variation in level of HIV knowledge according to patient's profile may help to target prevention message according to specific populations.

Key messages:

- Main modes of HIV transmission are well known.
- False beliefs regarding modes of prevention need to be explored to target HIV prevention messages.

Alcohol use among 15–16-year-old adolescents in Estonia, 2003–2015

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Background:

Alcohol is one of the most common psychoactive substances used by adolescents. The aim of the study was to describe the prevalence of alcohol use in 2003-2015 and to analyse association of alcohol use with family- and school-related factors, other risk behaviors, and perceived alcohol availability.

Methods:

This study was based on data of 15-16-year-old adolescents (n = 9559) from the cross-sectional studies of European School Survey Project on Alcohol and Other Drugs conducted in Estonia in 2003-2015. Prevalence of past 30-day alcohol use was calculated for each study year. Chi-square test for trend was used to assess statistically significant changes of alcohol use over the study period. Logistic regression analysis was used to analyse association between alcohol use and study year, family- and school-related factors, risk behaviors, and perceived alcohol availability. Fully adjusted odds ratios with 95% confidence intervals were calculated.

Results:

In 2003-2015, alcohol use decreased significantly among adolescents in Estonia ($p < 0.001$). In 2015, the prevalence of alcohol use was 36.1% (95% CI $33.4 - 38.8$) among boys and 39.1% (95% CI $36.3 - 41.8$) among girls. Fully adjusted logistic regression models showed that alcohol use among boys and girls was statistically significantly associated with study year, lower parental awareness where the child spends Saturday evenings, skipping the lessons, smoking, cannabis use and easy access to alcohol. Alcohol use was associated with lower socioeconomic status of the family and with unusual family structure among girls only. Compared to the first study year, alcohol use was lower in the last study year (OR = 0.52, 95% CI $0.43 - 0.64$ among boys, OR = 0.46, 95% CI $0.38 - 0.56$ among girls).

Conclusions:

In order to continue reduction of alcohol use among adolescents, the health promotion interventions should take into account the factors related to alcohol use in Estonia.

Key messages:

- Alcohol use decreased among adolescents in Estonia in 2003–2015.
- Alcohol use was associated with study year, family- and school-related factors, other risk behaviors and perceived alcohol availability.

Could Euroqol 5 Dimension questionnaire predict the characteristics of a hospitalization?

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Background:

Health related quality of life (HRQL) reflects how a particular state of health could influence individual wellbeing. Pathologies have a significant impact on the life, but the same conditions can be perceived differently so subjective evaluation by patient can be a valuable help to the doctors.

The aim of the study is to describe how the HRQL may correlate with some clinical conditions.

Methods:

A cross-sectional study was conducted in January-March 2019 in a private clinic. The Euroqol-5 Dimension (EQ-5D) questionnaire is a measure of quality of life to capture physical, mental and social functioning of patients and it was submitted at the time of admission. Examined variables were: age, sex, hospitalization period, EQ-5D index, EQ-5D dimensions (mobility, self-care, activity, pain, depression) and mini-mental state examination (MMSE). The sample was divided into subgroups for age (S1:<75 years, S2:>75) and for presence of problems (with or without). Statistical analysis was conducted using Stata 12.

Results:

A total of 59 patients were admitted, but only 33 (69.7% females) received the EQ-5D questionnaire. Average age was 80.2±12.3, higher for females (p = 0.02). The average length of stay was 12.7±9.4 days. The mean of EQ-5D index for the patients was 0.36±0.27 (S1:0.38±0.26; S2:0.27±0.3) and it did not seem to be significantly correlated with variables. The frequency of the EQ-5D dimensions problem stratified by age group was: mobility 96.97%(S1 21.21%, S2 75.76%), self-care 90.91%(S1 21.21%, S2 69.7%), usual activity 93.94%(S1 21.21%, S2 72.73%), pain 87.88%(S1 18.18%, S2 69.7%), depression 66.66%(S1 15.15%, S2 51.51%). The length of stay showed a significant correlation with pain(Spearman r = -0.45, p = 0.018) and depression(r = 0.46, p = 0.015).

Conclusions:

The majority of patients showed low level of EQ-5D index which is reflected in a low level of perceived HRQL. Pain and depression are the two dimensions that have shown a possible correlation.

Key messages:

- The EQ-5D index does not appear correlated to variables such as sex, age and length of stay.
- Depression and pain could be two important factors influencing a patient's admission and its length.

Implementation of a national epidemiological surveillance of prison suicide in France

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Context:

Worldwide, suicide is a leading cause of death in prison. In France, suicide of prisoners accounts for more than 100 deaths per year representing about half of the total deaths in prison. Moreover, suicide rates in French prisons are seven times higher than in the community and are among the highest in Europe. Reducing prison suicide is a public health priority inscribed in a joint action plan of both the Ministries of health and of justice. In order to prevent this tragic loss of life, prison services and health services must collaborate for the monitoring and understanding of the risk factors involved. The aims of an epidemiologic surveillance of prison suicide are to gather information about the medical factors and factors related to prison environment, analyze them and eventually produce recommendations for prevention.

Methods:

After months of consultation between Santé publique France, different administrations and professionals working in prison, a common methodology was set up. As from January 2017, whenever a suicide or suspected death occurs in prison, the Direction of the Prison Administration (DAP) informs Santé publique France, who in turn sends to the medical practitioner in charge of the prison health services a questionnaire including the history before detention: morbidity, addiction, attempted suicide, and during detention: contact with prison health services, diagnosis and final contact prior to death. Each year, the DAP sends to Santé publique France the socio-demographic, administrative, judiciary and prison environmental data of the persons.

Results:

In 2017, data were collected for 106 suicides from 71 prisons: 95% males, 49% remand, 44% murder or sexual assault, median incarceration time 96 days. Questionnaires were returned from prison practitioners for 100 cases (94%): regular contact 83%, prior suicide attempt 23%.

Conclusions:

Feasibility of a prison suicide surveillance is only possible with the implication of both prison and health services.

Key messages:

- Reducing death by suicide in prison is a public health priority.
- Feasibility of a prison suicide surveillance is only possible with the implication of both prison and health services.

A six-years point prevalence survey of healthcare-associated infections in an Italian hospital

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Healthcare-Associated Infections (HAIs) are among the most serious public health problems in Europe representing the most frequent adverse event during care delivery. Despite their limitations, point prevalence surveys of HAIs are often preferred to prospective surveillance, since they provide a feasible estimate when resources are limited.

The aim of this study was to analyze the results of a six-years point prevalence survey of HAIs in a teaching acute care hospital in Italy and to investigate the main risk factors of HAIs in the acute-care hospital. A point prevalence survey to detect HAIs was carried out in Gemelli Hospital during the last 6 years, from 2013 to 2018. Inpatients of any age in Gemelli Hospital were eligible for inclusion. Patients in outpatient areas were excluded. HAIs were identified according to diagnosis guideline from ECDC in 2011. Statistically significant differences were tested through t-test and Chi-square test. Multi-variate analysis was performed to evaluate the impact of regressor factors for predict HAI's prevalence. The statistical significance level was set at $p < 0.05$. The point prevalence ranged from 3,16% in 2017 to 6,64% in 2013. Pneumonia and surgical site infections (SSI) were the most frequent HAIs during the 6 years, with a rate of 27,31% and 26,20%

respectively of all HAIs. The multiple logistic regression showed that length of stay at the moment of detection, urinary catheter, CVC and antibiotic therapy are useful to meaningfully predict HAI prevalence, with a regression coefficient (adjusted R2) of 0.2780.

Thanks to proper hospital policies, the point prevalence of HAIs does not seem to increase through the years, even though it is still too early to draw any conclusions. Pneumonia and SSI represented each one more than a quarter of all the HAIs, as reported also in literature. There is a strong association between length of stay at the moment of detection and HAIs but it is hard to understand which one is the cause of the other.

Key messages:

- Point prevalence from 2013 to 2018 seems to be stable. An accurate incidence survey is needed in order to identify the main risk factors of HAI and to realize more specific hospital programmes.
- Length of stay at the moment of detection is useful to meaningfully predict HAIs prevalence although the cause-and-effect relationship is still not clear.

Alcohol-related attendances in French emergency departments in 2017

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Background:

France is one of the leading countries in terms of daily alcohol consumption per inhabitant. Alcohol is a major concern for emergency department (ED) since it accounts for a large part of their resources and increases behavior problems resulting in violence against staff. Individual information of French ED attendances registered in OSCOUR network are daily collected by Santé publique France, the French Public Health Agency. This study aims at describing alcohol-related ED attendances (ARA) in 2017 in France.

Methods:

The OSCOUR network included 677 ED in 2017 recording 92% of national attendances. ARA were identified through the main and associated medical diagnoses coded by physicians using ICD10. The study considered acute alcohol intoxication, dependence syndrome/withdrawal state, other mental disorders and intoxications due to alcohol, chronic complications and intentional self-poisoning by alcohol. The number of ARA was analyzed by age group, gender and region.

Results:

1.4% of total attendances were associated to alcohol consumption (202,184 attendances) in 2017. 68% of ARA were due to acute alcohol intoxication and 14% for dependence syndrome/withdrawal state. The highest proportions of ARA were observed for people aged 40-59 yo and 18-24 yo, particularly for women. Regions of North and West metropolitan France and La Réunion Island had the highest proportion of ARA among the total number of attendances.

Conclusions:

The part of ARA in France is consistent with figures provided in international studies using similar data. This proportion is similar with proportion of major public health issues like influenza, that represented 1% of the total ED attendances from November 2016 to February 2017 and reached 1.8% in January (month of the epidemic peak). Consequences of alcohol use represent a heavy burden for ED and the health system in France. This is all the more true as ARA are underestimated due to the low coding rate of associated medical diagnosis in ED.

Key messages:

- 1.4% of total French ED attendances were associated to alcohol consumption in 2017.
- This proportion is close to the proportion of influenza attendances in ED.

Evading the price: do French smokers go abroad to buy cheaper tobacco?

Raphaël Andler

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Background:

In France, selling tobacco is strictly supervised and can only be done by official ‘‘tobacconists’’ making the price lever all the more efficient in preventing smoking. However, tobacco prices are rather heterogeneous in Europe and France is surrounded by countries with lower tobacco prices. The aim of our study was to investigate tobacco cross-border purchases by French smokers.

Methods:

Data come from the Santé publique France health Barometer, a national representative phone survey. In the 2014, 2017 and 2018 editions, respectively 4,721, 1,854 and 2,594 smokers where asked about their habits regarding purchasing tobacco.

Results:

In 2018, among adults, 77.8% of cigarette smokers (including RYO cigarettes) made their last purchase from an official French tobacconist and 16.4% made it in a neighboring country. Rates in bordering regions are drastically higher. These figures are quite similar to the ones observed in 2014 while tobacconist purchases had increased in 2017 and abroad purchases had decreased. In 2018, among adults, 44.3% of cigarette smokers stated they had bought tobacco abroad at least once during the past 12 months.

Conclusions:

Our study suggests that the frequency of cross border tobacco purchases by French smokers decreased between 2014 and 2017 while tobacco prices were not modified in France but increased between 2017 and 2018 as French tobacco prices went up. Our study also emphasises the fact that cross border purchases were a lot more common in bordering regions.

Key messages:

- Part of French smokers avoid price increases by purchasing tobacco abroad.
- This public health policy measure could be more efficient if tobacco prices were aligned in Europe.

General practitioners, pregnancy and addictions in France in 2015

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Background:

Tobacco smoking and alcohol drinking during pregnancy result in serious health hazard for both the baby and the mother. In France, about 17% of pregnant women smoke and 20% consume alcohol. General practitioners (GPs) can have an active role in preventing those behaviors as they often interact with pregnant patients: one quarter of French pregnant women have had at least one antenatal visit with a GP. The aim of our study is to describe French GPs’ practices (screening and counseling) toward pregnant patients regarding tobacco smoking and alcohol drinking.

Methods:

In 2015, a telephone survey was set based on a stratified random sampling of metropolitan France GPs. A representative sample of 1,414 French GPs completed the study.

Results:

Screening for alcohol consumption at least once for every patient was done by 61% of GPs and for smoking by 82% of

GPs. Counselling to quit alcohol consumption was done by 77% of GPs while counselling to quit smoking was done by about 90% of them. GPs' practices were significantly better among those who had more recent ongoing training. Regular drinkers GPs were less likely to systematically screen for alcohol use and GPs' alcohol use frequency was adversely related to recommending quitting. Current and former smokers GPs were less likely to recommend quitting to pregnant patients smoking over 5 cigarettes per day.

Conclusions:

Screening for alcohol use and smoking during pregnancy is not yet systematic among GPs in France. GPs' prevention role with pregnant patients could be emphasized, potentially through initial and ongoing trainings adaptation. Besides, as regular alcohol use and smoking are related to unwanted practices, prevention for the benefit of GPs could be even more fruitful.

Key messages:

- Screening for alcohol use and smoking during pregnancy is not systematically done by French GPs.
- GPs' prevention role with pregnant patients could be emphasized, potentially through initial and ongoing trainings adaptation.

Tobacco smoking and binge drinking among university students in three European countries, 2009-2017

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Background:

Attention is needed on students as high levels of substance use are often part of the university experience. The aim of the study is to identify the trend of tobacco smoking and binge drinking among university students (US) of Belgium, France and the Netherlands over a 9 years period.

Methods:

Three repeated cross-sectional studies in US were performed in 2009-10, 2012-13 and 2016-17 in university of Antwerp (Belgium), Amsterdam (the Netherlands) and Rouen (France). US between 18 and 25 voluntarily filled out a self-administered anonymous questionnaire. The socio-demographic characteristics (age, gender, curriculum, job and accommodation) of the US were collected. Tobacco smoking and binge drinking in the previous 12 months were also collected. The trend test of Cochran-Armitage was used for comparisons.

Results:

In 2010, 1388 US were included in Antwerp, 1907 in Amsterdam, and 1137 in Rouen. In 2013, 1665 US were included in Antwerp, 3590 in Amsterdam, and 1488 in Rouen. In 2016, 2347 US were included in Antwerp, 4157 in Amsterdam, and 1011 in Rouen. Female gender was 63.4% in Antwerp, 68.7% in Amsterdam and 65.4% in Rouen. The prevalence of tobacco smoking was respectively in 2010, 2013 and 2016: in Antwerp: 31.0%, 33.5% and 27.6% ($p = 0.008$); in Amsterdam: 13.7%, 16.5% and 17.0% ($p = 0.003$); in Rouen: 21.3%, 23.7% and 23.5% ($p = 0.21$). The prevalence of binge drinking (more than once a month) was respectively in 2010, 2013 and 2016: in Antwerp: 16.2%, 12.3% and 16.7% ($p = 0.30$); in Amsterdam: 26.5%, 27.4% and 26.5% ($p = 0.82$); in Rouen: 8.6%, 16.6% and 7.1% ($p = 0.44$).

Conclusions:

Risk behaviours as tobacco smoking and binge drinking in US show a different prevalence according to country. Tobacco smoking decreases in two countries and frequent binge drinking did not change during the 9 years period. Further analyses need to be conducted taking into account the curriculum and the socio-demographic characteristics.

Key messages:

- Risk behaviours as tobacco smoking and binge drinking in university students show a different prevalence according to the European country.
- Binge drinking does not worsen for 9 years among university students.

Who does use ENDS in Russia? Results from Russian tobacco control policy evaluation survey EPOCHA-RF

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Background:

Electronic Nicotine Delivery Systems (ENDS) become popular in Russia. Still little is known about use of these products.

Aim:

To assess patterns of active and passive exposure to ENDS in Russian population.

Methods:

Data from Russian tobacco control policy evaluation survey (2017-2018) are analysed, conducted on the basis of multistage territorial random sample of 11625 respondents: 6569 smokers, 2377 former smokers and 2679 never smokers 18years and older in 10 Russian Federal subjects.

Results:

38.8% of the respondents were familiar with ENDS, with the highest proportion in the youngest age group (18-24): 53.8%($p<.0001$). 9.3%had tried ENDS, among 18-24 years old - those were 23.5%($p<.0001$). The amount was significantly higher among recent quitters (in last 3years)-17.2%, and current smokers-13% compared with former (quitters for more than 3years) and never smokers. Of those 26.4% used ENDS regularly-with highest proportion among 18-24years old (29.1%), and current smokers (27.1%). This comprises 2.5% of respondents as regular ENDS users, and 6.8%-among the youngest group. Half of the smokers had tried to quit by means of ENDS, of those 69% failed to quit smoking, and 79% could neither give up smoking nor ENDS. However, only 18% ENDS users agreed that e-cigarettes cause addiction, and 37% even denied the fact. Those were mostly the youngest respondents (45%). Vaping was not allowed at homes of 67.4%respondents, at workplaces-of 65.6%. 14% of respondents had witnessed vaping at workplaces, 55.8% in public places, 20.3% cafes, restaurants and bars. 51.4% had been exposed to secondhand aerosols of ENDS and 73.2%-among 18-24years olds. 37%found exposure to the aerosols annoying, with significant differences between never/former smokers (58% and 50.3%) and recent quitters and current smokers (39.3% and 29.2%).

Conclusions:

Young people are mostly exposed to ENDS in Russia. Strong legislation should be considered to regulate ENDS and protect people from their exposure.

Key messages:

- Electronic cigarettes are mostly prevalent among the youngest age groups, current smokers and recent quitters in Russia.
- ENDS do not help smokers to quit: vast majority of smokers who used ENDS for this purpose failed to give up both smoking and electronic cigarettes.

ENDS - a growing threat: results from Russian tobacco control policy evaluation survey EPOCHA-RF

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Background:

Electronic nicotine delivery systems (ENDS) including heated tobacco products not yet legally regulated are more and more imposed over the Russian population. Still very little is known about these products.

Aim:

To assess the exposure of Russian population to advertisement, promotion, of ENDS, and its attitudes and beliefs regarding these products.

Methods:

Data from Russian tobacco control policy evaluation survey (2017-2018) are analysed which used a systematic stratified multistage random sampling based on territorial household principle, representing the adult population (18+) of Russia in 10 Federal subjects. 20380 randomly selected respondents were interviewed and a stratified sample (n = 11625) of smokers (n = 6569), former smokers (n = 2377) and never smokers (n = 2679) participated in the survey.

Results:

In past 6 months 15.7% of the respondents were exposed to promotion of ENDS via internet, 14%-via social networks and 13.4% at the points of sale. Remarkably the youngest age group (18-24) was significantly more exposed to advertisement and promotion of ENDS from all sources than the rest of age groups: 32.6%, 32.3% and 24.3% respectively (p<.0001).

48% of respondents believe that secondhand vape of e-cigarettes is harmful for health of people, with significant differences among current smokers (40%), recent quitters (53%), former smokers (60%) and never smokers (66%). Majority agreed that it is necessary to regulate allowed amounts of nicotine in e-liquids (54%), to ban vaping in public places where tobacco smoking is banned (59.2%), ban the sales of these products to minors (68%), and the use of e-cigarettes by those (71.2%). 61.5% support the need for ban of all forms of advertisement, marketing and promotion of ENDS.

Conclusions:

ENDS present a real threat for Russian tobacco control policy achievements. The findings will be used to support new strong legislation to regulate ENDS in Russia.

Key messages:

- Young people much more than the others are targeted with advertisement and promotion of ENDS.
- ENDS present a real threat for Russian tobacco control policy and should be legally regulated like any tobacco products.

Tetralogy of Fallot in infants less than one year old in the Valencia Region (Spain)

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Background:

Tetralogy of Fallot (TF) is a rare disease characterized by the presence of 4 congenital heart defects (CHD). Objective: to describe the temporal trend and distribution of the TF in the Valencia Region (VR), in less than one year old, during the period 2007-2016.

Methods:

Live births, stillbirths and termination of pregnancy due to fetal anomaly (TOPFA) between 2007-2016 with TF (code Q21.3 of the ICD10-BPA) were selected from the Congenital Anomalies (CA) population-based Registry of VR. The cases were confirmed through the review of clinical documentation. The prevalence of 10000 births with 95% confidence intervals (95%CI) was calculated for the period and for each year, and a descriptive analysis of sociodemographic and clinical variables was made.

Results:

146 cases were identified (45.2% male, 31.5% female and 23.3% unknown), 89.0% were simple pregnancies and 54.8% were diagnosed prenatally. The overall prevalence of TF was 3.0/10000 births (95%CI: 2.5-3.5), being 2015 the year with the highest prevalence (4.3/10000 births) and 2011 with the lowest (1.8/10000 births). These changes were mainly due to the increase and decrease in the number of TOPFA respectively. 74.7% were live births, 22.6% TOPFA and 2.7% stillbirths. The prevalence in live births was 2.2/10000 births (95%CI: 1.8-2.6) and in TOPFA it was 0.7/10000 births (95%CI: 0.4-0.9), identifying an increasing trend during the period in the last one. 11.0% of live births died during the first year of life. 45.9% of the cases had another CA associated with the TF, being CHD in 52.7% of cases. 66.4% of the mothers were over 30 years of age, being the most frequent those between 30-34 years (30.1%).

Conclusions:

The prevalence obtained in the VR was lower than that of EUROCAT 3.5/10000 births (95%CI: 3.3-3.6) during the same period. EUROCAT has also identified the difference between the prevalence in live births (2.9 (95%CI: 2.8-3.0)) and TOPFA (0.5 (95%CI: 0.5-0.6)), and the increasing trend in the last one.

Key messages:

- The prevalence of Tetralogy of Fallot obtained in the VR was lower than that of EUROCAT (European network of population-based registries for the epidemiologic surveillance of congenital anomalies).
- EUROCAT has also identified the difference between the prevalence of Tetralogy of Fallot in live births and termination of pregnancy due to fetal anomaly, and the increasing trend in the last one.

Validity of sources of information used for the identification of Wilson's disease in the Registries

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Background:

Objective: to determine the sources of information used by the Regional Population-based Registries of Rare Diseases (RD) (RRD) for the identification of the Wilson's Disease (WD) during the period 2010-2015, and to evaluate the validity of these sources.

Methods:

A cross-sectional study was conducted involving 14 different Spanish Regions and the RD Research Institute. Possible cases with WD diagnosis included in RRD were identified with codes 275.1 in ICD9CM or E83.0 in ICD10 (unspecific codes referring to 'Disorders of copper metabolism'), and they were confirmed or not through a validation process in which clinical documentation was reviewed. Each Region sent their database to the coordinator (Valencian Region), which calculated the positive predictive value (PPV) for each source used individually and for the combination of two sources.

Results:

995 records were identified and reviewed. 444 were confirmed, 475 were discarded and 76 were considered as possible. The PPV for all sources was 44.6%. The Hospital Discharge

Database (CMBD) stands out as the main source of detection of possible cases with a PPV of 42.1%, followed by the Orphan Drugs Registry (ODR) with a higher PPV (80.8%) and by the Mortality Registry with a lower PPV (16.7%). The Clinical History of Primary Care (PC) obtained a VPP of 55.8%, but was only used in three Spanish Regions. The PPV for the combinations of two sources of information was 94.5% for the CMBD with the ODR, 91.5% for the ODR with PC and 73.9% for the CMBD with PC.

Conclusions:

Although CMBD has been the most widely used source, its PPV is not the highest. However, the ODR is the source with the highest PPV. The introduction in 2016 in the CMBD of the Spanish version of the ICD10 which includes a specific code for the WD (E83.01) is expected to improve this value. Cases identified by both (CMBD and ODR) may be automatically validated due to the high PPV obtained.

Funding: Fundació Per Amor a l'Art and Obra Social ''la Caixa''

Key messages:

- Wilson's disease is one of the 10 Rare Diseases included in the Spanish Registry of Rare Diseases but the validity of sources of information hadn't been studied.
- The introduction in 2016 in the Spanish Hospital Discharge Database of the Spanish version of the ICD10 will improve the validity of the sources of information used by the Registries of Rare Diseases.

Use and perceptions of electronic cigarette by the adult population in France in 2017

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Background:

E-cigarette (EC) use is controversial because its benefit-risk ratio is still unclear. Since its introduction on the French market at the beginning of the 2010's, French health authorities have published cautious recommendations. The study aims at describing uses and perceptions about EC among the adult population.

Methods:

Santé Publique France's Health Barometer, the French national public health agency, is a cross-sectional random survey conducted annually by phone, on a representative sample of the population aged 18-75 y/o in Mainland France. Descriptive analysis and logistic regressions were performed to analyze data collected from the 25,319 respondents of the 2017 edition.

Results:

In 2017 in Mainland France, 3.8% of the population used an EC, 2.7% on a daily basis. Among EC daily users, 60.4% were men, 57.9% had a bachelor degree or higher qualifications. Less than 1% of EC users were never-smokers, 50.3% were daily or occasional smokers, 49.5% were former smokers. The number of daily ex-smokers who did quit smoking (> = 6 months) and believed that vaping has helped them to, was estimated to be 700,000 since EC has been available in France. EC was perceived as equally or more harmful than regular cigarette by half of the population (51.5%), a proportion that has increased since 2014 (43.4%). Daily smokers perceived EC as more harmful, while being an EC user from high socioeconomic status was associated with the perception that EC is less harmful. The bans on EC in places where smoking is prohibited and on sales of EC to minors (<18 y/o) were appreciated by 66.9% and 77.5%, respectively.

Conclusions:

These results show that in France, EC is strongly related to current or past smoking habits. A significant number of ex-smokers believe that EC has helped them quit smoking. Sociodemographic differences in the perception of EC harmfulness suggest social inequalities in access to information.

Key messages:

- Electronic cigarette users in France are few and most of them are smokers or former smokers.
- The perception of electronic cigarettes harmfulness depends on sociodemographic and smoking status.

Challenges of a French Hospital Discharge algorithm to detect non-accidental paediatric burns

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Background:

Child maltreatment includes physical, psychological, sexual abuse and acts of neglect. Among the resulting non-accidental injuries, burns are responsible for an important morbi-mortality. The main objective was to build a detection algorithm of non-accidental paediatric burns (NAB), using ICD-10 codes in the hospital resumes from the French Hospital Discharge Database (HDD).

Methods:

Children aged 0 to 16 years old hospitalised at the University Hospital of Tours from 2012 to 2017 with a coded burn were included. ''Probable'' or ''possible'' HDD cases of NAB were defined based on specific ICD-10 codes during the inclusion stay or the previous year. A chart review was performed on all the HDD cases and HDD non cases matched on sex and age with a 1:2 ratio. Performance parameters were estimated for three clinical definitions of suspected child maltreatment: excluding neglect, including neglect with restriction then broad definition. For clinical cases, report to the judicial authority (RJA) or worrying information (WI) was searched.

Results:

Among the 253 included children, 83 ''probable'' cases and 153 non cases were analysed. Sensitivity varied from 48% (95%CI [36-60]) to 90% [55-100] when excluding neglect, specificity from 70% [63;77] to 68% [61;74]. The positive and negative likelihood ratios varied respectively from 1,6 [1,2;2,3] to 2,8 [2,1;3,7] and from 0,7 [0,6;0,9] to 0,1 [0,0;0,9]. The proportion of clinical cases with no RJA/WI without reason varied from 0 (when excluding neglect) to > 85% (with broadest definition); all corresponded to a possible isolated neglect.

Conclusions:

The performances of the algorithm varied tremendously according to the clinical definition level of child maltreatment. Neglect is obviously difficult to clinically detect. Training for healthcare professionals and qualitative studies on obstacles to RJA/WI should be added to this work.

Key messages:

- The performances of an algorithm to detect non-accidental pediatric burns (maltreatment) using the French hospital discharge database dropped when including neglect, difficult to diagnose clinically.
- Training for healthcare professionals and qualitative studies on obstacles to the judicial authority (RJA) or worrying information (WI) should be added to this diagnostic study.

Autochthonous chikungunya and dengue fever outbreak in Mainland France, 2010-2018

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Background:

Aedes albopictus, vector of dengue and chikungunya viruses, is implanted in mainland France, exposing to the risk of autochthonous transmission. Since 2006, epidemiological and entomological surveillance activities aim to prevent or limit the occurrence of autochthonous cases. We aimed to describe episodes of transmission and control measures implemented in order to reflect on surveillance activities.

Methods:

We reviewed all publications and documents produced on autochthonous transmission episodes in France and surveillance protocols. We reviewed surveillance activities, investigation methods and control measures implemented.

Results:

Between 2010 and 2018, eight episodes of autochthonous dengue fever transmission and three of chikungunya were recorded in mainland France. All of them occurred in the South east of France, between July and October, when vector density was the highest. Transmission areas were limited to single domestic houses located in discontinuous urban areas. Only two episodes happened in two distinct areas. Chikungunya episodes led to 31 cases and dengue fever episodes to 23 cases. Most cases were identified by door-to-door investigations set-up in transmission areas. We isolated serotypes 1 and 2 for dengue and East Central South Africa lineage for chikungunya in autochthonous cases. Adulticide vector control measures were effective in controlling transmission.

Seven episodes of transmission were due to failure in identifying primary imported cases. Four episodes occurred because of the absence or the lack of vector controls measures around primary imported cases.

Conclusions:

Surveillance activities, and autochthonous cases investigations, were effective in limiting the extent of transmission, but were highly demanding for surveillance actors. Identified causes of transmission highlight the need of regular awareness campaigns targeting physicians and biologists.

Key messages:

- Effectiveness of the surveillance system of dengue, chikungunya and zika viruses, and autochthonous cases investigations.
- Needs of awareness and training courses targeting health professionals to the risk represented by these viruses.

Self-rated health and attitude to cardiovascular prevention in male population in Russia/Siberia

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Objective:

To establish the dynamics of the relationship to the prevention of cardiovascular disease, awareness, attitude to their health for 32 years (1984 -2016 yy.) In the open population among males 25-44 years in Russia / Siberia (Novosibirsk).

Methods:

Within the framework of WHO's MONICA-psychosocial program random representative samples of the male population aged 25-64 years in Novosibirsk were examined: 1984-85 (n = 753); 1988-89 (n = 739); 1994-95 (n = 657); 2013-2016 (n = 427), used the 'Knowledge and attitude to one's health' scale.

Results:

During the observation period from 1984 to 2016, the number of men 25-44 years old believed that they are 'healthy' or have 'good health', but at the same time, the number of those who believe that their health they care clearly is not enough. Most men were of the opinion that a healthy person can develop a serious illness within the next 5-10 years. The number of those who believed that preventive measures will help to avoid some serious diseases has increased. Men began to stop working more often, if they did not feel well, the number of those who reduced their work and had a rest increased. The number of men has grown, who believe that a preventive health check is useful and who has started to observe proper nutrition. The number of men who smoke has decreased.

Conclusions:

The dynamics of attitude towards the prevention of cardiovascular diseases, awareness, attitude to their health for 32 years indicates that at present health has become a value dominant due to a new understanding of the importance of health in terms of adapting to modern economic requirements.

Key messages:

- The purpose of our study was to study the dynamics of awareness and attitudes towards one's health for 32 years (from 1984 to 2016) in an open population of working-age men 25–44 years old.
- The purpose of our study was to study the dynamics of awareness and attitudes towards one's health for 32 years (from 1984 to 2016) in an open population of working-age men 25–44 years old.

Long-term trends in adherence to prevention in female population aged 25-44 years in Russia/Siberia

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Objective:

To determine the 23-year trends 1994-2016 yy of adherence towards cardiovascular diseases prevention, behavioral characteristics and awareness about the health in general female population aged 25-44 years in Russia / Siberia.

Methods:

Under the third screening of the WHO program MONICA and sub-program 'MONICA-psychosocial' (MOPSY) random representative sample of women aged 25-64 years (n = 870) were surveyed in Novosibirsk in 1994; 284 persons in group 25-44y. In 2016 within the framework of the screening studies covered by state task reg.# 01201282292 a random representative sample of women aged 25-44 years was examined in the same district of Novosibirsk (n = 540). Questionnaire MOPSY 'Awareness and attitude towards the health' was used to estimate adherence towards cardiovascular diseases prevention, behavioral characteristics and awareness about the health.

Results:

The analysis showed there is a positive trend in self-rated health in female population aged 25-44 years. Despite this 50% of women rate their health negatively and 96% consider the existence of high chance to be ill with serious disease within next 5-10 years. Majority of women believed in the possibilities of modern medicine for the prevention of heart disease but there is extremely low level of healthcare utilization as prevention measure and it doesn't exceed 10% in those women ($p < 0.05$). There is a growth of job stress levels and upward trends in family status changes over 23 years in an open population of women aged 25-44 years. Some changes in behavioral status were found over 1994-2016 yy: increased share of people quit smoking and doing regular physical exercises, improved diet behavior.

Conclusions:

We showed a positive trend in CVD risk factors prevention in women 25-44y. In spite of this, half of the women negatively evaluate their health and using of healthcare resources is deficient. There are adverse changes in the social gradient over the follow-up period.

Key messages:

- The purpose of this survey was to study the trends in awareness and attitudes towards cardiovascular prevention over 28 years (from 1988 to 2016) in an open female population of 25-44 years old.
- The purpose of this survey was to study the trends in awareness and attitudes towards cardiovascular prevention over 28 years (from 1988 to 2016) in an open female population of 25-44 years old.

West Nile virus infections in France, July to November 2018

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In July 2018, one autochthonous case of West Nile virus (WNV) infection was identified in Nice, Provence-Alpes-Côte d'Azur (Paca). We investigated to determine the potential place of infection and the extent of viral circulation in the area, in order to guide control and preventive measures. In affected areas, we raised awareness of health professionals on WNV infections, substance of human origin safety relied on nucleic acid testing for WNV and on deferral of blood donors indicating minimum one night of stay in the areas for 28 days. Equine, wild bird and entomologic surveillance activities were reinforced. The human arboviruses national reference laboratory (NRL) retrospectively tested samples from hospitalized individuals from June 1st with meningitis and encephalitis around Nice. We tested negative suspected autochthonous cases of chikungunya and dengue infections notified since July in Paca and presenting WNV compatible symptoms. Measures were adapted along identification of additional cases.

We identified 27 autochthonous cases, with onset of symptoms between July 7th and November 12th: 24 in Paca, 2 in Corsica and 1 in Occitanie. Seven cases presented neuroinvasives symptoms, 18 flu-like symptoms and 2 were asymptomatic. One blood donation and 2 organs tested positive for WNV. The animal NRL identified 13 equine cases (1 in Paca, 5 in Corsica and 7 in Occitanie) and 4 infected raptors with nervous symptoms (3 in Paca and 1 in Corsica). Genomic characterization of the virus identified a strain belonging to the lineage 2 among 2 raptors. No virus was found in mosquitoes captured in affected areas.

Since 2000, six episodes of WNV transmission were reported in France but none with this extent. For the first time, the lineage 2, circulating in Italy and other European countries, was isolated in France which might be changing epidemiological situation. Therefore, surveillance activities should be revised in order to promptly secure blood products.

Key messages:

- We describe the most important episode of West Nile Virus transmission identified in humans in France.
- In 2018, West Nile virus lineage 2 was isolated for the first time in France which might change the epidemiological situation in the country.

Out of country tobacco purchases decrease despite a price increase and plain packaging in France.

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Background:

The introduction of new anti-tobacco measures in France (plain tobacco packaging, higher prices) might encourage smokers to buy their tobacco from other sources than tobacco shops. We examine whether these measures increased the likelihood of smokers purchasing tobacco abroad, depending on their driving distance from the border of a neighboring country with lower tobacco prices.

Methods:

DePICT is a two-wave cross sectional national telephone survey examining the French population tobacco-related perceptions and behaviors before and after the introduction of the new measures in 2017. Smokers were asked whether they bought tobacco from abroad in the last 12 months. Shortest driving distances to neighboring countries' border were calculated using Google Maps (<100 Km, 100-200 Km, 200-300 Km, >300 Km and Ile-de-France (IDF)). Data was weighted to be representative of the population living in France. Multivariate regressions, adjusted on socio-demographic characteristics as well as substance use behaviors, were carried out.

Results:

Compared to smokers living at more than 300 Km from a border, those living near a border, and in IDF were significantly more likely to have bought tobacco from abroad (<100 Km: ORadjusted = 3.98; 100-200 Km: ORadjusted = 2.04; 200-300 Km: ORadjusted = 1.47; IDF: ORadjusted = 1.32). Smokers in wave 2 (n = 929) were significantly less likely than those in wave 1 (n = 1238) to have bought tobacco abroad (ORadjusted = 0.81 [95% CI: 0.69-0.96]). It was mainly smokers who were in a driving distances of 100-200 Km, and 200-300 Km who were significantly less likely to buy abroad across the 2 waves (respectively ORadjusted = 0.56 [95% CI: 0.34-0.92] and ORadjusted = 0.50 [95% CI: 0.27-0.92]). Supplementary analyses showed that it was mainly for men and smokers born in France that the decrease was significant.

Conclusions:

Our results suggest that the new anti-tobacco measures did not increase out of country tobacco purchases by smokers.

Key messages:

- The introduction of new anti-smoking measures (increase in price, plain tobacco packaging) did not increase the likelihood of smokers purchasing tobacco from abroad.
- It was mainly male smokers and smokers born in France that had a decreased likelihood of purchasing tobacco from abroad after the introduction of new anti-tobacco measures.

The ICHOM standard set for patient reported outcomes in diabetes

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Background:

Between 2017-2018, the International Consortium for Health Outcomes Measurement (ICHOM) conducted a targeted study to deliver a standard set of outcome measures in diabetes, including patient reported outcomes. Compared to other conditions, the study faced the challenge of a complex data collection in a highly prevalent multifactorial chronic disease.

Methods:

We conducted a structured systematic review of outcome measures focusing on adults with either Type 1 or Type 2 diabetes, followed by a consensus-driven modified Delphi panel including a multidisciplinary group of academics, health professionals and patient representatives. The applicability of the standard set was explored by collecting external feedback from patients and health professionals worldwide.

Results:

The panel identified an essential set of case-mix characteristics and clinical outcomes, including factors related to diabetes control, acute events, chronic complications, health services and survival that can be regularly measured using routine data and ad hoc data collection. Three validated instruments were recommended for ad-hoc data collection of patient-reported outcomes: the "WHO-5" for psychological wellbeing, the "PAID" for diabetes distress and the "PHQ-9" for depression. The feedback received from members of the panel highlighted substantial challenges with regards to the applicability of the approach at a large scale.

Conclusions:

The standard set recommended for use to monitor, benchmark and improve diabetes care has received strong support from stakeholders involved in the process worldwide. However, substantial challenges remain on how to organize a systematic data collection worldwide, with implications on policy and practice that can equally apply across all areas of chronic care. Prioritization of selected targets may be useful to achieve practical results in the immediate future.

Key messages:

- A standard set for the data collection of person-centred outcomes in diabetes has been successfully delivered by ICHOM, including case-mix characteristics, clinical and person reported outcomes.
- The feedback received from a range of stakeholders highlight implications for policy and practice in the data collection of PROMs for person-centred chronic disease monitoring.

Singular death-causes contribution to temporal trend-shifts of its major causes in Spain, 1975-2016

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Background:

Mortality is the arrow of aggregated individual's life style of living beside the national public health and health care system outcomes. The contribution of specified death-causes to the temporal evolution of its great cause, is targeting the community framework for public health action reduction.

Objective:

To assess yearly contribution of specified death-causes to temporal trend-shifts of its major death- cause in Spain, 1975 to 2016.

Methods:

causes of death were selected based on magnitude and relevance in public health. Coding-linkage was established between ICD-9 to 10 revisions. Annual-standardized rates were calculated by the direct method according to the European Standard Population from 1975 to 2016. Linear trend period changes were measured through Joinpoint regression models as annual percentage change (APC) and 95% confidence intervals (CI). Joinpoint v4.0.4 and R v3.2.2 software were used at $p < 0.05$ for statistically significance level.

Results:

Neoplasm rates have been going downwards (extreme years came from 162.2/100,000 inhabitants to 145.5) on ending year-periods of 1995-2008-2016. Lung and colorectal cancers replicated neoplasm shape in lower magnitudes. Cardiovascular displayed two decreasing trajectories in 1975-1993 and 1993-2013, and a last flat stage in 2013-2016, while cardiac ischaemia and ictus crossed their trend periods. Ictus has evolved quite in parallel to cardiovascular disease. Influenza and pneumonia conformed a close profile to respiratory great cause contribution, in different periods: 1975-1988 [-8.03% (-9.08, -6.96%)] and 1988-2016 [-2.38% (-2.85, -1.91%)]. Traffic accidents have been modulating external causes dropping shape with a nonsignificant slope period- trend in the 1994-2001 years.

Conclusions:

The contribution of any singular causes of death into temporal development of its great causes, is a plausible tool for public health surveillance issues addressed to action.

Key messages:

- The great cause of death in temporal evolution is a moving aggregate result of its singular causes of death components over last time.
- Inflection-trends years-period of death causes are a plausible tool to public health surveillance.

How to estimate mild Traumatic Brain Injury Incidence? The interest of Emergency Departments data

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Background:

Traumatic brain injury (TBI) is a major public health issue, with a significant socio-economic burden. In France, very little is known about TBI epidemiology, and the TBI population is mainly described via studies carried out on the most severe patients. A large number of studies showed that a significant proportion of patients suffer from long-term disability after mild TBI (mTBI). This Post-Concussive Syndrome (PCS) remains poorly known by health professionals. Identifying early prognostic factors for the development of PCS is therefore essential, since it can ensure widespread clinical and economic benefits. This work aims at providing an updated description of the incidence of mild TBI (mTBI) based on data from Emergency Departments (ED) in the Ile-de-France (IDF) region (Paris area).

Methods:

We estimated the mTBI incidence, using mainly data from the OSCOUR (Organisation de la Surveillance Coordonnée des Urgences) database from 01/01/2011 to 31/12/2015. The OSCOUR Network data collection methodology is based on the registration of all patients visiting the emergency services (ED) of participating hospitals. An extrapolation of the proportion of TBI patients visiting an OSCOUR ED to all ED of the IDF allowed us to compute a mTBI Annual Incidence Rate (AIR) in IDF.

Results:

Between 2011 and 2015, 95,910 mTBI patients visited the OSCOUR ED in IDF, and the AIR was estimated at 292.4/

100,000 inhabitants (when reported to the French population scale: a total of 196,000 mTBI are supposed to happen each year).

Conclusions:

The surprisingly high incidence rate of mTBI observed in this study requires an evaluation of public health measures to prevent these injuries and reduce their consequences. New screening procedures should be implemented to point out the patients at risk for complications and PCS. Alongside the care aspect, prevention should be developed to reduce the incidence of TBIs, and prevention policies should be assessed by reiterating our evaluation.

Key messages:

- Between 2011 and 2015, 95,910 mTBI patients visited the OSCOUR Emergency Departments in Ile de France, and the annual incident rate was estimated at 292.4/100,000 inhabitants.
- The mTBI high incidence rate requires an evaluation of public health measures to prevent these injuries and reduce their consequences, but also the implementation of new screening procedures.

Characterization of alcohol consumption patterns among older adults in Ireland

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Background:

Identifying the factors associated with hazardous drinking patterns and problem drinking is imperative to develop appropriate intervention strategies for alcohol harm reduction among the older population. The aim of this study was 1) To explore the patterns of alcohol consumption among older adults in the Republic of Ireland, and 2) To establish possible predictors of hazardous and problem drinking in this population.

Methods:

A cross-sectional analysis was carried out on samples of individuals aged >50 years at Wave 3 of The Irish Longitudinal Study on Ageing (N = 4948). Hazardous alcohol consumption was defined as drinking above Irish guidelines [women >11 Standard Irish Drinks (SD)/week; men >17 SD/week], and/or having at least one heavy drinking episode per week (>6 SD/day). Problem drinking was defined as a score of > 2 on the CAGE instrument. Regression analyses investigated outcome differences according to socio-demographic and health characteristics. Sampling weights were applied to account for differential non-response.

Results:

The prevalence of drinking patterns was 13% for lifetime alcohol abstainers, 8% for former drinkers, 26% for occasional drinkers and 53% for weekly drinkers. Among weekly drinkers 25% exceeded the guideline threshold, 23% had at least one heavy drinking episode per week and 16% had an alcohol problem according to the CAGE. In fully adjusted models, hazardous drinking and problem drinking were associated with younger older adults, male sex, current or past smoking, higher levels of stress and/or social isolation.

Conclusions:

Our findings serve as a starting point to monitor trends of alcohol consumption among older adults in the Republic of Ireland. Our results highlight areas of opportunity for targeted screening and public interventions that seek to reduce alcohol harm among this population.

Key messages:

- In the Irish context, older adults who are younger, male, current or past smokers, with higher levels of stress and/or social isolation are more likely to engage in hazardous alcohol consumption.
- Our characterization of drinking patterns highlights areas of opportunity for targeted screening and public interventions that seek to reduce alcohol harm among older adults in Ireland.

Diabetes surveillance in Germany – strategy for the dissemination of results

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Background:

Diabetes mellitus is a non-communicable disease with high public health relevance in Germany. Therefore, the Robert Koch Institute startetd to establish a national diabetes surveillance system in Germany in 2016. Essential part of a surveillance system is the dissemination of health information to the relevant stakeholders to facilitate its translation into action.

Methods:

For the development of the dissemination strategy, different sources of information were used. First, an online-survey combined with structured web-research explored dissemination approaches in the international context. Secondly, a workshop with public health experts from seven countries highlighted best practice examples. Based on this information, a dissemination strategy was developed in close alignment with the scientific advisory board of the diabetes surveillance including experts from politics, prevention research, regional health reporting, physicians/diabetologists and public health scientists.

Results:

Three main questions were identified to be considered in the dissemination of health information: Which audience group is addressed? Which content is relevant to this group? What is the preferred format to communicate the information? Therefore, a diabetes report will be generated focusing on health policy makers summarizing the key information on the disease dynamic. A website containing all information including a visualization tool should facilitate access for stakeholders. Additionally, awareness needs to be raised using social media, classical media and direct interactions with relevant stakeholders.

Conclusions:

In alignment with different stakeholder groups, the diabetes surveillance developed a dissemination strategy considering international best practice examples and innovative ideas for health data visualization. The next steps are to refine the dissemination strategy based on feedback from the different stakeholder groups to ensure the use of the provided information.

Key messages:

- A dissemination strategy for the diabetes surveillance has been developed in a participatory approach including experts from various stakeholder groups.
- Next steps include the refinement of the dissemination strategy and its formats based on stakeholders feedback requirements.

Waterpipe Use Prevalence Rate in Turkey: A Meta-analysis Study

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Background:

The aim of the study was to perform a meta-analysis of studies about the waterpipe use prevalence in Turkey.

Methods:

PubMed, Web of Science, Turkey Citation Index, TR Index and the Cochrane Library databases were screened both in Turkish and English languages to identify relevant studies by using keywords 'waterpipe use', 'prevalence' and 'Turkey'. Inclusion criteria; original and cross-sectional design, studies that done during and after the year 2010, studies that given the number of participants and number of people using waterpipe and studies that done in Turkey. Open Meta Analyst demo program was used to calculate the prevalence rate of the study groups. Since the articles were $p < 0.001$ in the heterogeneity test, prevalence rate and 95% confidence intervals were calculated from the number of cases using the random effects model in group analysis.

Results:

As a result of first literature review 26 articles were reached. Duplications were eliminated and summaries of the remaining articles were read as double-blind. Ten studies were included in the study that were suitable for inclusion criteria and quality evaluation. Seven of the studies were conducted only in university students, while 3 were community-based. As a result of the analysis, 2399 of 8845 university students used waterpipe (31.0%; 95% CI: 27.3-34.7), while 356 of the 33,129 individuals used waterpipe (1.2%; 95% CI: 0.04-2.0) in community-based studies.

Conclusions:

As a result of the comprehensive literature research, it was found that the studies on waterpipe use were less in literature and prevalence was higher than expected in university students.

Key messages:

- In university students, the use of waterpipe was more common than the community, and intervention studies about the use of waterpipe were needed.
- Waterpipe use and surveillance studies in the communities are important for taking preventive measures and monitoring health outcomes.

Description of low back pain attendances in French ED

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Background:

Low back pain (LBP) is one of the leading contributors to disease burden worldwide [1]. In 2018, French health care insurance launched a population awareness campaign in order to promote effective behaviour change in France. Because LBP acute episodes often lead to emergency visits, Santé publique France, the French Public Health Agency and the Federation of Observatories for Emergency Medecine, performed a pre-campaign situational analysis of LBP in the French emergency department (ED) involved in the OSCOUR® network.

Methods:

The OSCOUR network is part of the French syndromic surveillance system SurSaUD® [2] coordinated by Santé publique France since 2004. In 2017, the system collects daily individual data from about 700 ED representing 92% of the French ED attendances. Those data contain demographic, administrative and medical information including discharge diagnosis coded according ICD-10. ED attendances with a diagnosis related to LBP were analyzed from 2014 to 2017. Temporal distribution of LBP attendances, hospitalizations after discharge and stay duration in ED services were also analyzed.

Results:

From 2014 to 2017, 504 ED were included in the analysis and LBP represented 1.12% (N = 481,291) of ED all visits. This proportion remained stable over the period. 60% of LBP attendances concerned 18 to 50 years old adults and almost 10% were hospitalized after discharge. This proportion increased with age to reach 43% for the 85 years old and more. LBP attendances were more frequent on Monday. Median stay duration were almost 3 hours but increased with age and for hospitalized patients.

Conclusions:

The broad coverage of the ED OSCOUR® network on the whole territory and the strong partnership between epidemiologists and clinicians enable Santé publique France to produce reliable results which are also consistent with ED physician's perception. Finally those results can be used as a reference contributing to evaluate potential benefits of this campaign.

Key messages:

- This description of low back pain ED attendances is consistent with emergency physicians perception on field and can be used as a reference to evaluate potential benefits of the prevention campaign.
- The national coverage of the ED OSCOUR® network and the strong partnership with emergency physicians enable Santé publique France to produce relevant description on the main causes of ED attendances.

Geographic disparities in bladder cancer incidence among women in the department of Bouches-du-Rhône

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While the incidence of bladder cancer begins to decline in men it increases in women related to tobacco smoking. The study aimed to describe bladder cancer among women in the department of Bouches-du-Rhône and assess their spatial distribution in order to detect potential spatial clusters. Cancer incidence data were obtained from the departmental observatory of cancers REVELA13. The characteristics of the cases registered were compared to those describe at the national level. Age-standardized incidence ratios (SIRs) were calculated for each commune and bayesian smoothed risk estimate based on the Besag, York and Mollie model were computed for incidence mapping. The spatial scan statistic (SaTScan) was used to investigate local cluster. Spatial analyses were adjusted on various confounding factors as a French deprivation index, access to health-care services and population density.

During the period 2013-2016, 395 cases of bladder cancers were diagnosed in women. Departmental incidence was significantly higher (3.3 cases per 100.000 inhabitants) than the national incidence (2.3). Compared to men, bladder cancers among women were diagnosed at a more advanced stage of the disease ($p < 0.01$). SIRs geographical variations were related to access of care but none of the communes showed any significant excess of cases. However, one significant cluster including nine districts of the biggest city (Marseille) and one neighbouring commune (RR = 1.76) was detected in the south east of the department.

Spatial studies of bladder cancer in women rarely find over-incidence or clusters due to lack of power. However, this study has shown that geographical disparities exist in particular because of a lesser access to a specialist. Regarding the high prevalence of smoking among women in the south of France, practitioners need to think about bladder cancer in women with urinary signs.

Key messages:

- We identify for the first time a cluster of bladder cancers in women in France.
- Practitioners need to think about bladder cancers in women with urinary signs because this cancer will become a public health issue in the future.

Challenges in a population-based registry of cardiovascular disease in Shiga, Japan

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Background:

Stroke and cardiovascular disease are one of the leading causes of death and disability in Japan. In order to investigate current burden, we conduct a population-based registry of cardiovascular disease in Shiga Prefecture, Japan since 2012. We will demonstrate challenges in conduct of the registry study.

Methods:

In 2012, we established the Shiga Stroke Registry (SSR), a multicenter population-based registry study designed to build a complete information system for the management of stroke in Shiga Prefecture, Japan. The registry uses local monitoring, combined with remote data collection and quality control systems, to create an integrated surveillance system among a network of all acute care hospitals with neurology/neurosurgery facilities and smaller hospitals with rehabilitation facilities in the region. In 2019, study name has changed to Shiga Stroke and Heart Attack Registry (SSHR) and additional registration of coronary heart disease and aortic disease have started. Each case is reviewed and adjudicated by 2 or more specialists.

Results:

In the financial year of 2018 (from April to March), a total of 4809 stroke cases were identified. From December 2018 to April 2019, a total of 515 coronary heart and aortic diseases were identified. A total 10 nurses work full-time for the registry and it takes average of 1 hour to collect information for each patient. Challenges in conduct of the cardiovascular registry involve regulatory and ethical approval, funding, associations with local hospitals, non-standardized hospital diagnosis, staff training for comprehensive data collection including pathophysiology, examination and treatment, and quality control of data collection.

Conclusions:

SSHR is a population-based registry of wide range of stroke and cardiovascular disease in Shiga Prefecture, Japan. In order to keep quality of the data, we put a lot of efforts on staff training and quality control.

Key messages:

- Population-based registry of wide range of stroke and cardiovascular disease in Shiga, Japan.
- In order to keep quality of the data, we put a lot of efforts on staff training and quality control.

Case-control study about exposure to BPA and DEHP and risk of endometriosis

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Background:

BPA and DEHP are endocrine disruptors. BPA-G and MEHP are their main metabolites. The main exposure route for human is the diet. Endometriosis is a pathology with uncertain etiopathogenesis, characterized by disturbances in sex hormones balance with a prevalence in women ranged from 1% to 7% in women aged 15-45 years.

Methods:

A case-control study should highlight a possible relationship between exposure to DEHP and BPA and endometriosis. Patients (n = 40) with a surgical diagnosis of endometriosis will compose the group of cases; healthy women (n = 40) will compose the control group. Cases and controls will be studied by means of questionnaires and by means of urinary analysis of these endocrine disruptors concentration.

Results:

BPA values ranged between 0.05-8.55 and 0.05-1.84 in cases and in controls, respectively; BPA-G values ranged between 0.05-16.1 and 0.05-7.38 in cases and in controls, respectively; total BPA values ranged between 0.05-3.26 and 0.05-3.51 in cases and in controls, respectively. DEHP values ranged between 13.63-57.78 and 16.66-61.93 in cases and in controls, respectively; MEHP values ranged between 1.74-6.16 and 4.26-14.16 in cases and in controls, respectively; total DEHP ranged between 15.27-63.93 and 21.72-72.73 in cases and in controls, respectively. A reverse correlation was found between endometriosis and phthalates, while a direct correlation was found between BPA and endometriosis.

Conclusions:

The direct correlation between BPA and endometriosis suggests the decreasing the use of plasticizer in food packaging and the importance to implement interventions and strategy to minimize exposure. The reverse correlation between endometriosis and DEHP could be explained by the small size of sample and by the monitoring of urine that are representative of a short-time exposure.

Key messages:

- Improve epidemiological studies with analysis of alternative matrices that are more representative of long-time exposure.
- Implement interventions and strategy to minimize exposure to plasticizer.

Géodes: the health indicators web portal of the French Public Health Agency

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Background:

Santé publique France, the French Public Health Agency, produce numerous health indicators (diseases or health determinants) from many different data sources (specific or unspecific surveillance systems, epidemiological and behavioural surveys, administrative databases). In order to improve visibility and accessibility of these indicators, a web portal ''Géodes'' was created.

Methods:

Géodes was built with Géoclip Air© developped by a French start-up. This ergonomic tool allows to explore the geographical dimension of health indicators through interactive maps along with graphs and tables. In addition, Géodes is designed to explore the temporal dimension of indicators produced yearly or weekly through dynamic maps or time series. All indicators are linked to an explanatory sheets. Description, sources, precisions or limits of interpretation are discribed. It is also easy to present indicators in interactive tables, exportable in different formats such as Excel spreadsheets.

Results:

Since February 1st 2019, Géodes is available online without any access restriction (https://geodes.santepubliquefrance.fr). Over 300 health indicators are provided related to infectious and chronic diseases, occupational and environmental health, behaviours, emergency departement attendances, etc. An indicator is either a number of cases, a proportion or an incidence rate. Most indicators are stratified by categories such as sex or age group. It is possible to represent two indicators on a single map, e.g. the smoking prevalence and the standardised rate of lung cancer.

Conclusions:

The days following the opening to the public, the site recorded up to 10,000 connections per day. In routine, the site knows up to 200 visits per day, up to 3,000 in case of quoting aparticular indicator in the media. These figures show that this health data observatory meet a real need.

Key messages:

- A web portal of health indicators created by Santé Publique France is now available. More than 300 health indicators are integrated in the portal.
- Indicators can be visualized through interactive maps, tables and time series and their values are easily exportable and communicable.

A claims-based algorithm to identify cancers in a French retired self-employed craftspeople cohort

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Background:

In France, possible long-term effects of past occupational exposure to carcinogen in the French retired self-employed craftspeople (RSEC) was studied in the ESPrI cohort. For health surveillance, a passive epidemiologic follow-up was set up, using algorithms based on medico-administrative databases developed to identify retiree with incident cancers.

Methods:

A total of 15,030 RSEC were invited between 2005 and 2009 to fill the questionnaire about social and demographic characteristics, occupational history, frequency of activities involving potential exposure to asbestos fibers. For health surveillance, health-related French administrative databases were used. Since 2009, healthcare data from 7,544 ESPrI retirees had been annually extracted from the national health insurance cross-fund information system (Sniiram), include the French hospital discharge database system (PMSI) and the registered Long-Term Diseases database (LTD). The objective was to track incident cancers (ICD-10) and their date of diagnosis using algorithm based on 1) hospital stay with principal, related or associated diagnosis; 2) historic of the registered LTD which was available for each retiree.

Results:

Among 7 544 ESPrI retirees, matching through medical records, 256 different incident cancers from asbestos-related localizations were identified between 2011 and 2017, 243 in men and 13 in women - a total number of 105 lung cancers, 122 colorectal cancers and 29 others cancers (mesothelioma, larynx, ovarian, oesophagus, pleura cancers).

Conclusions:

A passive follow-up by using French national health administrative databases in order to evaluate the potential health effect of occupational asbestos exposure offered the advantage of reducing the risk of attrition and decreasing the total cohort cost. In 2019, a study was set up with then French cancer registries to evaluate algorithm's performance.

Key messages:

- A claims-based algorithm developed by the French public health Agency to identify incident cancers.
- Epidemiological follow-up of ESPrI cohort provides indicators on the health of retired self-employed craftspeople.

Huge mortality fluctuations in working ages in Russia after 1991: is alcohol affordability in charge?

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Background:

Mortality rates from various causes of death significantly fluctuated inRussia after1991,with especially profound amplitude observed in working age populations.This study was aimed to investigate association between affordability of alcohol(AA),pattern of alcohol drinking(PAT),and several selected mortality indicators in which large alcohol-attributable fractions were assumed.

Methods:

Econometric estimation of AA was based on calculation of the ratio of index of real disposable income to vodka price index adjusted for consumer price index.PAT was defined as the index of proportion of strong alcohol beverages sold a year in retail.Spearman's rho andKendall's tau-b correlation coefficients were estimated to assess strengths of bivariate associations between AA,PAT and indices of all-cause mortality,of mortality from external causes(EC) and from diseases of circulatory system(CSDs)at working ages(M:16-59;F:16-54yrs)in a time-series analysis between1991 and2016.All indices were calculated with1991 taken as the reference year. All primary data were obtained from the Russian Federal StateStatistics Agency"RosStat".

Results:

All-cause mortality and mortality from CSDs in both males and females quite precisely repeated fluctuations of AA between 1991 and 2005(tau-b>0.600,p<0.050; rho>0.700,p<0.050). Same moderate to high strength associations were observed between mortality fromEC and AA for 1991-2003.The strongest moderate to high strength associations between PAT and all-cause,CSD and EC mortality were observed during the period after1995, when pattern of drinking began changing towards consumption of low alcohol content beverages, especially beer. PAT repeated fluctuations of AA between 1991 and 1999.

Conclusions:

Our findings further support alcoholic hypothesis of huge mortality fluctuations in Russia during the period after 1991, suggesting that alcohol affordability had played the key role before 2005 and pattern of drinking influenced on mortality decline after 2005.

Key messages:

- Fluctuating affordability of alcohol was one of the major determinants of alcohol consumption, and, consequently, of fluctuations of alcohol-attributable mortality in Russia between 1991 and 2005.
- The ongoing from 1995 change of pattern of alcohol consumption from spirits to low alcohol content drinking likely significantly contributing to mortality decline observed in Russia after 2005.

Hypertension and body mass index in a population of 19-year-old men in Poland

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Background:

Hypertension is a main yet potentially modifiable cardiovascular risk factor. It is the most widespread disease of the 21st century, especially in highly industrialized societies. It is estimated that hypertension affects about 25% of the adult population in the world and reaches a ceiling of 32% and another 30% of the adult population is characterized by pressure values classified as pre-hypertensive. The prevalence of hypertension is geographically diverse and closely depends on economic and socio-cultural conditions. The relationship between hypertension and obesity is the subject of many studies that explicitly confirm the occurrence of positive coincidence.

Methods:

The study was observational-retrospective, and included a group of 17 282 men, aged 19, from the southeastern region in Poland. All subjects met the qualifications for compulsory military service in 2017. We analyzed selected data obtained from the records of the Ministry of National Defense.

Results:

Hypertension was found at 0.6%, weak body structure at 0.8% and obesity co-existing with cardiorespiratory insufficiency has been reported 2.6% of respondents. The underweight concerned almost 7%, and the overweight and obesity of 25% of conscripts. The vast majority of people with hypertension were characterized by excessive body weight (74.8%), mainly overweight.

Conclusions:

Hypertension was seen in a negligible percentage of males studied and was significantly associated with an increase in BMI, particularly with regards to being overweight. Excessive body weight significantly more often affected people with a higher degree obesity co-existing with cardiorespiratory insufficiency, affecting of the system and men with hypertension. Excessive body weight was seen in a considerable percentage of males studied and was significantly associated with the prevalence of hypertension and obesity co-existing with cardiorespiratory insufficiency, but not affecting of the system.

Key messages:

- The assumed observation contribute to the presentation of selected indicators of health status and their relationship with hypertension in a large population of 19-year-old men.
- Data obtained this way, enrich the state of knowledge about the growing problem of hypertension and they can be a valuable ground for developing educational and preventive programs for Public Health.

Open Comparisons in Public Health Not Only a Report But Also a Practical Tool Package

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Sweden is a high-income country with about 10 million people 2018. The public health policy has a clear focus on equitable health throughout the population, and a goal to reduce avoidable health inequalities within a generation. The 21 regions and 290 municipalities in Sweden are political self-government and important as most of the welfare services that impact citizens' lifelong health fall under their remit, for example; healthcare, childcare, education, social service, elderly care and support to people with disabilities, some emergency services, environmental issues urban planning. Therefore, the municipalities and regions need reliable data that can be compared.

Such data is available in the report Open Comparisons in Public Health (OCPH). The OPCH 2019 demonstrate large inequities in determinants of health and in health outcomes between municipalities in Sweden. Further work is needed to reduce these unjust and avoidable differences. The OPCH 2019 is not only a report, but rather a concept with additional practical tools to be used by local and regional public health officers, leaders and politicians. Following tools, developed in collaboration with stakeholders, are available in the concept OPCH.

OPCH 2019: various managementresearch review, result comparisons, suggested improvement areas

Factsheet: for leaders and politicians at policy level

Municipality reports: tailored for public health officers to save time

Socioeconomic compass: a tool to analyze differences in socioeconomics across municipalities

Kolada: the Swedish database for municipal benchmarking

Toolbox: tools to facilitate systematic interpretation and analysis

The National Public Health Agency: various statistics are available for additional analyses

Key messages:

- The OPCH and the tools contributes to initiate local/ regional development, improvement, monitoring and analysis concerning the quality and efficiency of the services delivered by these organisations.
- Governmental policies are important structural links16, but according to the OCPH 2019 the reduction of health disparities also requires measures in each local community.

Modeling the impact of changes in tobacco use on individual disease risks

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Philip Morris International has developed a Population Health Impact Model (PHIM) to estimate the effects of marketing Reduced-Risk Products on population health. The PHIM creates a disease-specific risk profile for each individual based on their age and smoking history.

To create a risk profile, the PHIM calculates, at each year of age, the excess relative risk (ERR = relative risk [RR]-1) by multiplying an individual's equivalent dose (ED) by the ERR for smoking vs. never smoking. ED is defined as 0 at birth and stays at 0 while the individual is a non-smoker. Once tobacco use starts, the individual's ED rises toward the relative exposure (RE) corresponding to the product used. Following quitting or change of product, ED moves toward the new value of RE. The model uses estimates of age- and disease-specific current smoking RRs and ERR half-lives following cessation, derived from meta-analyses of published data.

Estimates of the half-life of excess risk are also used when estimating rise in ERR following initiation or change in ERR following a change in product use. We apply the method to data for the four main smoking-related diseases; lung cancer, ischemic heart disease, stroke, and chronic obstructive pulmonary disease.

For a given disease and age group, the PHIM can derive estimates of the average ERR for each individual in the population studied. Given an overall estimate of absolute population risk, the PHIM can then also be used to derive estimates of absolute risk for each individual.

Key messages:

- Health impact modeling can be used to understand the individual and population impacts of introducing reduced risk tobacco products.
- Footnote: *Reduced-Risk Products are products that present, are likely to present, or have the potential to present less risk of harm to smokers who switch to these products vs continued smoking.

Trends in tuberculosis incidence rates in the Region of Sousse (Tunisia) from 1992 to 2016

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Introduction:

In 1993, the World Health Organization declared that tuberculosis is a public health emergency of global concern. All efforts were made in accordance with the Millennium Development Goals (MDGs) to reduce the burden of Tuberculosis. The MDG framework built into national priorities and development strategies has, in fact, strengthened epidemiological surveillance and the use of reliable data to make decisions based on objective data. These data are essential for planning, managing the activities of the National Tuberculosis program, monitoring and ongoing evaluation of its performance. In this context, we conducted this study to trace the trend of Tuberculosis incidence rate recorded in the Sousse Region between 1992 and 2016.

Methods:

This is a longitudinal study of the registered data of tuberculosis cases in Sousse between 1992 and 2016. For the trend analysis the software JOINPOINT version 4.5.0.1 was used. This software offers the closest possible regression model of the different points and gives an annual percentage change (APC) with a 95% confidence interval.

Results:

The highest TB incidence rates was recorded in 1993 (85.66 cases per 100 000 inhabitants). Between 1992 and 1997, there was a significant downward trend of TB incidence (APC = -23.2; 95% CI [-28.8, 1]). Between 1997 and 2004 the trend was stable. Between 2004 and 2016, there was a significant upward trend (APC = 8.3; 95% CI: [4.3, 12.4]).

Conclusions:

At the national level, between 1992 and 2002, tuberculosis experienced a fall in incidence rates, as a result of an improvement in the socio-economic level and the organization of tuberculosis control. Since 2004, the trend has been rising. Increased tuberculosis control is advocated to end tuberculosis by 2030 in line with sustainable development goals.

Key messages:

- After a significant decrease, the tuberculosis incidence has increased significantly since 2004.
- The tuberculosis prevention efforts should be intensified to reverse the current trend.

Cancer incidence trend in northern tunisia: 1994-2009

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Background:

Cancer is a major public health problem in Tunisia. The objectives of this study were to describe the epidemiological pattern of cancer for all and main cancer sites in Northern Tunisia during the period 2007-2009 and to analyze it's incidence trend between 1994 and 2009.

Methods:

Cancer registry of Northern Tunisia was the source of data for the identification of patients for this study. This registry notify, since 1994, all cases of malignant tumor in people living in the District of Tunis, Nabeul, Zaghouan, Bizerte (North East) Beja, Jendouba, Kef and Siliana (North West). Cases were codified using the third version of International Classification of Diseases for Oncology. Demographic data were provided by the National Statistical Institute. Incidence trend analysis was achieved by using JoinPoint Software.

Results:

During the period 2007-2009, the age-standardised incidence rate of all sites combined was 149.2/100 000 person-years and 112.3/100 000 person-years respectively among males and females. The sex ratio was 1.26. The mean age at diagnosis was 58.28±16.77 years. The most common sites for males were: lung, bladder, prostate and colorectal; while for females, they were breast, colorectal, thyroid and cervix uteri. Local stage at diagnosis was observed in 37.7% of cases. The highest incidence rates were observed in the District of Tunis and in the governorates of North East. The trend incidence cancer of all sites combined during the period from 1994 to 2009 was significantly risen except for stomach cancer among males and cervix uteri among females with annual percent changes of -2.5% and of -4.1% respectively.

Conclusions:

Despite the existence of a national cancer strategy in Tunisia, many barriers affect the implementation of interventions; while the trend cancer incidence continues to rise particularly in males. Strengthening prevention strategy of this scourge is strongly recommended.

Key messages:

- Cancer is a major public health in world and in Tunisia.
- Prevention must be applied to reduce the incidence of cancer.

DT Injury prevention / genomics / ethics

Study of the factors associated with the delay of health consultation of victims of rape in Senegal

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Introduction:

Rape remains one of the most serious forms of sexual violence because of its negative impact on the physical and mental health of victims. The objective of this study is to identify the factors associated with the delay of consultation of victims of rape at the level of health structures at the level of health facilities in Senegal.

Methodology:

A retrospective, descriptive and analytical observation study was conducted. The study population consisted of all the court files of girls or women victims of rape recorded during the period from 2006 to 2015. An exhaustive recruitment of all the files of the girls or women victims of rapes answering the criteria of inclusion has been made. The uni and multivariate analyzes were carried out respectively using the software Epi Info 2000 and R 2.2.9.

Results:

At the end of the collection, 1,037 cases of rape were enlisted at the national level. The average consultation time at the health facility level was 14.6 days ± (37.9). The delay in consultation (> 24 hours) was noted in 38.6% of victims of rape. Victims of rape residing in the southern axes (ORaj = 4,31 [1,15-16,14]), north (ORaj = 4,22 [1,26-14,14]), major (ORaj = 1, 67 [1.04-2.68]), married (ORaj = 3.44 [1.58-7.5]) with pregnancy after the aggression (ORaj = 34.03 [15.47-74.85]) or an abortion (ORaj = 5.45 [1.04-24.47]) were more at risk of delaying consultation after rape.

Conclusions:

The delay of consultation makes difficult the medical and judicial care of the victim of rape. Thus, it is important for health and judicial authorities to raise awareness about the harmful consequences of sexual violence and the therapeutic benefits and the reparation of the harm suffered by the victim in case of rape.

Key messages:

- Rape. Violence.

Preventing accidents in the offshore Oil and Gas industry: An interrupted time series analysis

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Background:

Oil and Gas industry suffers from high accident rates because of the dangerous working conditions. Eastern Mediterranean countries have an immature Oil and Gas industry and therefore it is crucial for preventing accidents in this early stage to implement internationally proven successful policies. The aim of this study was to investigate whether the accident prevention policies implemented by Norwegian government in 2001 were effective in reducing accident rates in the offshore Oil and Gas industry.

Methods:

Data on the number of accidents, dates and type of facility (fixed or movable) for the years 1999-2006 were obtained from the Norwegian Petroleum Safety Authority (PSA). The effectiveness of the policy to reduce accident rates was estimated in interrupted time series analysis with post-intervention period the 1st of January 2001. Poisson regression was used to model the number of accident per months.

Results:

The dataset had 96 months with a median number of accidents per month 6.5 (IQR: 4-10) for fixed facilities and 5.0 (IQR: 3-9) for movable facilities. The analysis suggested that there was a reduction in accident rates for fixed and movable facilities. Following the policy, there was a reduction in accidents of 45% for fixed facilities (rate ratio (RR) 0.55; 95% confidence interval (CI) 0.47-0.64), while for movable facilities there was a decrease of 67% (RR 0.33; 95% CI 0.28-0.39).

Conclusions:

The policies implemented by Norwegian government in 2001 were effective in reducing the accident rates for fixed and movable facilities. The immature Oil and Gas industry of the Eastern Mediterranean countries will be benefited from studying and adopting some of the policies implemented by Norwegian government.

Key messages:

- Norwegian policies for accident prevention in the offshore Oil and Gas industry were successful.
- Oil and Gas industry of Eastern Mediterranean countries should adopt proven successful policies to prevent accidents.

Benzodiazepine use and occupational injuries: a systematic review and meta-analysis

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Objective:

To investigate whether use of benzodiazepine is associated with increased risk of occupational injuries.

Methods:

PubMed, Cochrane, Embase and CINAHL databases were searched. A meta-analysis was performed to calculate odds ratio (OR) and 95% confidence interval (CI) among case controls, cross-sectional studies, either questionnaire or laboratory exams based.

Results:

A total of 20 studies met inclusion criteria, 75% of them of low quality, involving 328,805 occupational injuries from 9 different countries, with an estimated prevalence of benzodiazepine positivity of 5.3% (95%CI 4.2-6.3), significantly greater in mining industries (15.7%, 95%CI 10.8-42.2), agriculture (11.1%, 2.3-19.8), and lower in commercial drivers (0.9%, 95%CI 0.1-2.4). Among the retrieved studies, 9 were based on laboratory analyses, 7 were questionnaire-based retrospective analyses, 5 were analyses of institutional databases. In 7 cases (all questionnaire bases), rather then benzodiazepine use, a proxy was reported (e.g. sedative, anxiolytics, etc). While no increased risk for occupational injuries was found among cross-sectional studies based on laboratory specimens (OR 0.59 95%CI 0.25-1.38; I2 63%), in questionnaire-based case control studies reporting the regular uptake of benzodiazepine was associated with higher risk for occupational injury (OR 2.11 95%CI 1.30-3.43, I2 55%).

Conclusions:

These results suggest an elevated risk of occupational injuries among individuals who have reported chronic use of benzodiazepines, while no actually increased use was reported from specimens associated with the occupational injury. Even though benzodiazepines have the potential to increase injury rates among chronic users, it is reasonable to understand the underline disorders (e.g. sleep deprivation, anxiety, etc) rather than benzodiazepine use per se as the actual risk factors to be specifically addressed.

Key messages:

- Benzodiazepine use has the potential to increase the risk for occupational injuries, however evidence is conflicting.
- Underlying disorders causing the uptake of benzodiazepines rather than the drugs 'per se' are apparently associated with increased risk for occupational injuries.

Research for road safety by multidisciplinary approach in Benin: From 'ReMPARt' Unit experience

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Issue/Problem:

Road crashes are the primary cause of death within the 15-29-year-old age group. In Benin, there is no policy of road safety. The establishment of effective policies requires objective data that can guide decision-making. Research institutions are poorly integrated in this process. To fill the gap in scientific evidence and to participate in the decision-making, the Department of Epidemiology and Bio-Statistics of Regional Institute of Public Health, along with partners, set up a unit research dedicated to road safety, the UR ReMPARt.

Description of the method:

UR ReMPARt, based on multidisciplinarity and intersectoriality, is the first initiative of its kind in the African sub-region. Its mission is to contribute to political decision-making on the subject of road safety via research development and on a template of sustainability of interventions. The intervention strategies are: training, research development, and knowledge transfer.

Results:

Created in May 2017, this research unit is organized around academic and professional competences from different countries. Assessment after two years shows four continuous training sessions on different themes, the development of doctoral research projects, and activities of expertise. Three Ph.D. thesis and five masters students in epidemiology are also in training to reinforce the unit. The partnership contains dedicated consortiums for the mobilization of resources in favour of the research and training for road safety.

Lessons:

Intersectoriality and multidisciplinarity are requisite to guide the relevance of the research and provide the adequate answers on the matter of road safety. The research and the targeted transfer of results remain key foundations to direct decision-making. The reproducibility of this initiative must take in consideration those principles and constitute an opportunity of sharing of experience and networking in favour of the joint cause that is road safety.

Key messages:

- Research in road safety cannot be one way vision.
- Building political decisions around conclusive data is henceforth an obligation to integrate in our practices.

The role of preimplantational diagnostics in comtemporary reproductive medicine - a survey

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Background:

Preimplantational diagnostics is a relatively new technique for diagnosing genetic and other abnormalities in different stages of fetal development. It provokes serious research interest and objections due to its probable consequences - the possibilities for selective abortion based on a selective approach to people depending on their hereditary peculiarities. In this connection, we conducted the present survey on society's attitude towards some aspects of preimplantation diagnostics.

Methods:

114 subjects (21 men and 93 women), aged between 18 and 60 years (mean 28.44±1.16), participated in an anonymous survey.

Results:

69.3% of respondents expressed their strong support for the application of preimplantational diagnostics. We report a dependance of approval on respondents' educational degree – participants with a secondary education approve in the smallest degree of preimplantational diagnostics $p = 0.004$ ($\chi2 = 15.40$). When comparing the results by respondents' age, it is worth noting that those older than 41 years approve in a greater degree of preimplantational diagnostics $p = 0.001$ ($\chi2 = 28.03$) – most commonly these are people with a Master's degree. It is more common for men to think that preimplantational diagnostics should be used for determining physical traits (colour of the eyes, hair etc.) and sex $p = 0.05$ ($\chi2 = 5.73$). As an explanation to their positive answer some respondents give the existence of sex-related genetic diseases. Therefore, even when the smallest doubt is present the so-called sexing should be conducted.

Conclusions:

The participants in the survey approve of the use of preimplantational diagnostics in strictly observed rules and conditions. With the present laws in force there are numerous unresolved aspects and issues. More than half of the participants (66.7%) think that contemporary reproductive technology (incl. preimplantational diagnostics) could influence positively the attempt to overcome the demographic crisis in Bulgaria.

Key messages:

- Preimplantational diagnostics is a relatively new technique for diagnosing genetic and other abnormalities in different stages of fetal development.
- We conducted the present survey on society's attitude towards some aspects of preimplantation diagnostics.

The role of civil society in child safety in Europe

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Introduction:

The complexity of injury and the multi-sectoral nature of its prevention demands a whole-of-society approach. Engaging with civil society in a form of collaborative governance is central to this approach. Civil society, defined as neither state, nor market, nor family, includes organisations such as advocacy groups, charities, professional associations etc. This study looks at the role of civil society organisations in the implementation of child injury prevention interventions in Europe.

Methods:

The method was built upon an existing approach, known as 'organigraphs'. Mintzberg and van der Heyden developed the approach to depict how organisations actually work. We further developed its practical application to explore how interventions in child safety are developed, implemented and monitored across the local, regional, national and EU levels. Professionals working in child safety in 25 European countries were asked to draw organigraphs for an intervention in one of four child injury domains: road, water, home safety or intentional injury prevention. The analysis focused on the action surrounding civil society actors, represented by the connectors leading to and from those actors.

Results:

We received 44 organigraphs in total from 31 participants in 24 countries; nine for intentional injury prevention, nine for water safety, 12 for road safety and 14 for home safety. Civil society actors were present in the majority of Organigraphs and they played multiple and diverse roles including: 'advising', 'funding' and 'implementing' child safety initiatives.

Conclusions:

The role of civil society, described in this data set, appears to be relatively well-developed. Strong, functional and long-standing partnerships between civil society actors across policy sectors and government may lead to greater capacity to address the complexity of child injury.

Key messages:

- Effective child injury prevention requires multi-sectoral action to address its complexity. Stakeholders come from the public and private sector and from civil society.
- Greater engagement with civil society may represent an opportunity for countries and regions to improve their response to the challenges of injury prevention among children.

Injury profile and healthcare expenditure of cyclists admitted in intensive care units

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Background:

The current paper is part of the EU-funded REHABILAID Project and aims to describe the profile of cyclists sustaining severe injuries in a road traffic incident as well as the healthcare costs associated with their injury, including hospitalization costs and out-of-pocket expenditure.

Methods:

Seven public hospitals were involved; Greece = 5, Italy = 1 and Germany = 1. Both the intensive care units (ICU) and sub-intensive care units (as high-dependency areas) were involved. Participants enrolled during a 12-month period starting from April 2013 and were followed for one year from admission date. The study used widely recommended classifications for injury severity (AIS-Update 2008, MAIS). Information on the injury was retrieved upon patients' consent, from medical records while interviews were carried out at months 1,6,12 for personal and cost-related information. Health Care Expenditure was assessed through the MUARC's framework. Diagnosis-related groups (DRGs) were used to estimate hospitalization costs.

Results:

120 subjects enrolled in the study in total and 14 were cyclists(Greece = 1, Germany = 3, Italy = 10). Most of them were men(n = 9, 64.3%), with a mean age of 55.5 years (SD16.3;min 32-max 84). As for the current incidents, the majority occurred at city roads (n = 10;71.4%), straight roads (n = 9;64.3%) and intersections (n = 3;21.4%). Many were single-vehicle (n = 4;28.6%), lateral (n = 4;28.6%) and front-lateral (n = 3;21.4%). Half of the cyclists sustained an injury of MAIS3+ severity (n = 7;50.0%). A major injury was primarily sustained at the lower extremities (n = 10;71.4%), head (n = 7;50.0%), face (5 = 35.7%) and upper extremities (n = 5;35.7%). The mean total hospitalization cost was 5815,6(min 209,00-max 20.647,00) and the mean direct costs arising from injury was 4.047,5(min 0,0-max 24.670,00).

Conclusions:

Individual differences need to be taken into account in future injury prevention efforts as well as in attempts to improve healthcare system's response to road victims.

Key messages:

- Systematic collection of data relevant to health condition and economics of the victims is necessary at European level.
- Personalized rehabilitation plans are necessary to facilitate the recovery process of victims.

Early osteoporosis diagnosis improves post-hip fracture outcome

Giagkos Lavranos

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Background:

Hip fracture is associated with mortality and high rate of hospital re-admission after discharge. Osteoporosis screening and treatment have been shown to lower the risk of hip fractures. The aim of this study was to assess whether osteoporosis treatment also improves the post-hip fracture overall outcome.

Methods:

All patients over the age of 65 that sustained a hip fracture at a tertiary University Hospital were approached to enroll in the study. The patients were informed of the context of the study, all queries were answered and an informed consent was signed by the patients in the presence of one of the investigators. The data were collected over an 8 month period from October 2017 to June 2018 and the cohort was followed up until February 2019. Recorded outcomes included mortality, re-admission and unscheduled hospital visit.

Results:

The overall mortality rate of elderly patients after a hip fracture was 12.3% (n = 24) after a 6 month follow-up period. The overall event rate of elderly patients after a hip fracture was 29.7% (n = 58) after a 6 month follow-up period. Only 3% of patients were already on osteoporosis treatment. However, patients on treatment for osteoporosis had a favorable outcome with no deaths and significantly less overall events ($p < 0.0001$).

Conclusions:

Early osteoporosis screening and treatment in the elderly can not only prevent falls and fractures, but also improve outcome in case a hip fracture does occur.

Key messages:

- Osteoporosis treatment improves outcome after a hip fracture.
- Despite relevant guidance, osteoporosis screening in the elderly remains suboptimal.

DU LGBTI and minorities health

Evaluating equity in healthcare: pilot implementation of a self-assessment tool

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Background:

Several sets of standards aiming at improving access and quality of care for service users have been published in recent years. Certain standards focused on improving healthcare providers' responsiveness to specific target groups. The general goal of this research was to improve organisations' awareness of equity standards that are not focused on specific groups, but on all contributing factors that put vulnerable groups at risk of exclusion. The specific objective was to evaluate the degree of compliance with a set of equity standards in 52 health care organisations from 16 countries.

Methods:

A self-assessment tool (SAT) was developed to allow healthcare organisations to measure their capacity to provide equitable care for service users. The SAT indicates the main areas that should be addressed: equity in policy; equitable access and utilisation; equitable quality of care; equity in participation; promoting equity. A cross-sectional survey addressing participants from pilot-organisations was used for data collection, concerning both the self-reported compliance score with the standards, as well as the additional information provided to support the score assigned. Data were analysed quantitatively as well as qualitatively.

Results:

The findings confirm that healthcare providers do invest in improving equity in the access and delivery of services to vulnerable groups. However, many health organisations have inadequate strategies to address inequities and are insufficiently engaged in improving equity in participation and promoting equity outside the organisation.

Conclusions:

The participating organisations reported a significant impact from use of the self-assessment tool: some received the support from regional/national authorities to continue working on improving equity in healthcare; others linked the equity standards to existing performance-measurement strategies; others invested in new frameworks to improve service users engagement.

Key messages:

- The implementation of the SAT contributes to a self-reflective process, involving health professionals and managers, in which gaps and potential improvements are identified.
- Pilot organisations utilised the SAT as part of a process of increasing their awareness of equity issues and changing their organisational culture.

Roma origin as a factor for high level of adolescent fertility and abortion rate in European Union

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Background:

Adolescence is a vulnerable phase in human development. Adolescent girls from Roma origin, especially younger girls, are particularly vulnerable because they face the risks of premature pregnancy and childbirth. The study aims to evaluate the association between Roma origin of mothers and prevalence of adolescent fertility and abortion rate in EU member states.

Methods:

A correlational study was conducted and data on prevalence of adolescent fertility and abortion among adolescent girls (per 1000 live births) were extracted from European database "Health for all". The means of variables in different countries were compared and Pearson's correlation coefficients with share of Roma population were calculated. Data processing was performed by SPSS v.24.

Results:

Increasing trend in premature childbirth has been observed in parallel with the increase of share of Roma population within countries, significantly more expressed in South-East member states. The mean adolescent live birth rate in the countries with highest proportion of Roma population was 5.6 times higher as compared to the mean for those with lowest proportion of Roma population. The highest level of proportion of live births to mothers aged less than 20 years was found in Romania (9.8%) and Bulgaria (9.5%). At the same tame proportion of Roma population in those countries is highest: Bulgaria (4.7%) and Romania (2.5%). The relation of adolescent fertility rate with share of Roma population shows significant positive correlation ($r = 0.804$, with 2-tailed significance $p = 0.000$). As far as the correlation of abortion among adolescent girls with the Roma origin is concerned, it is inverse and not significant.

Conclusions:

Our results indicate significant correlation between share of Roma population and adolescent live birth in EU member states. A holistic approach is needed in which socio-economic development and education of Roma girls leads to further reduction of adolescent childbirth and abortions in EU.

Key messages:

- Adolescent girls from Roma origin in EU face the risks of premature pregnancy and childbirth more expressed in South-East member states and significant positive correlation for it was found.
- Bulgaria is the country with highest share of Roma population (4.7%) and in the second place according proportion of live births to mothers aged less than 20 years (9.5%) in the EU in 2015.

A public health campaing – health promotion in Roma minority population in the City of Zagreb

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Background:

Researchers into health inequalities consistently show disadvantages in health status for various ethnic minority groups. Socially and economically Roma are one of the most vulnerable and disadvantaged groups. The Roma population of Zagreb approximates 2.755 according to the 2011 census. "Health promotion in Roma minority" is public health initiative undertaken in the City of Zagreb in 2018.

Objectives:

The aim was to recognize the need for early risk factors prevention, to increase health literacy and to improve access to health-care in Roma minority.

The stakeholders involved in this program were Roma NGOs, Andrija Stampar Institute of Public Health, local Medical Centre and City office for health. The role of Roma activist was inportant for including Roma population.

Results:

In order to assess the health status and health-related lifestyle attributes a multidisciplinary approach was carried out including a total of 141 members of the Roma minority living in three different quarters. Activities included preventive exams, conducted workshops "Reproductive health", "Access right to health-care"and "Healthy lifestyles". Hypertension was found in 15,6% Roma using standard diagnostic criteria (i.e. BP $\geq$ 140/90 mm Hg). High blood shugar was found in 16,3% Roma. Screening mammography exams were also carried out including 73 Roma women over 50. BI-RADS 3 category was found in 17 women (23,3%) and BI-RADS 4 + 5 category was found in one woman.

Conclusions:

The multisectoral collaboration and the involment of Roma activist could help to achieve better inclusion of Roma population, better perception of the health messages and behavioural changes. Health sector should promote and advocate for healthier lifestyle, but community and policy are to support and complement the actions. Access to health care cannot be discussed in isolation from other problems this population group experiences, such as poverty, restricted access to education and social exclusion.

Key messages:

- The empowerment is an outcome of health literacy, but does not automatically lead to empowerment.
- Individual's social and cultural context must be in focus. The involment of Roma activist could help to achieve better results.

Roma populations and health inequalities: a systematic review of multiple intersecting determinants

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Background:

Roma populations experience significantly poorer health than majority populations. Health outcomes are often worse than for others in similar social positions, suggesting differences are not simply the effect of poverty. Roma women are thought to be worst affected. However, data pertaining to the multiple social inequalities affecting Roma populations, their interaction and cumulative effect on health over time, have yet to be synthesised.

Methods:

We searched four bibliographic databases (MEDLINE, Science Citation Index, Social Sciences Citation Index and Scopus), screened reference lists, consulted key informants and searched organisational websites for studies providing empirical evidence on more than one determinant of health for Roma populations in Europe. Two reviewers carried out screening, data extraction, quality appraisal and performed a narrative synthesis.

Results:

From 2,043 bibliographic records, 37 studies met our inclusion criteria. The median number of influencing factors explored through qualitative and quantitative methodologies was 2 (range 1 - 5) and 3 (range 1 - 11), respectively. Quantitative studies focussed on poverty (10 studies) and other indicators of socio-economic status including education (13 studies), housing (9 studies) and employment (9 studies). Very few studies unpicked interactive effects instead testing each factor's contribution to poor health independently. Qualitative studies tended to explore "Roma culture" (11 studies) and the impact of discrimination/racism on health behaviour (10 studies). There is a lack of gender-disaggregated data and little analysis of the impact of social policy on the health of Roma populations.

Conclusions:

Evidence for associations between determinants and health outcomes among European Roma populations is patchy. Research needs to pay more attention to the health impact of social policies that have the potential to reinforce (as well as mitigate) the exclusion of Roma populations.

Key messages:

- This systematic review critically analyses the state and shape of research evidence on the multiple interacting axes of inequality that contribute to poor health among Europe's Roma populations.
- There is a divergence between qualitative and quantitative studies, with the former providing some evidence on socio-economic status and the latter exploring aspects of culture and discrimination.

Pre-exposure prophylaxis in a sexual health clinic for Men who Have Sex with Men in Portugal

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Background:

Pre-exposure prophylaxis (PrEP) is defined as the use of antiretroviral drugs to prevent HIV acquisition in uninfected individuals. Recognizing the increasing use of informal PrEP in Portugal, CheckpointLX, a community clinic targeted for MSM in Lisbon, Portugal, began offering counselling and follow-up services prior to formal introduction. This study aims to characterize PrEP users attending CheckpointLX before formal PrEP introduction in Portugal, and those who were referred to PrEP in the National Health Service (NHS) following formal approval of PrEP.

Methods:

Data was collected by peer counsellors between May 2015 and September 2018 and inserted in a database. Medical care followed EACS recommendations for PrEP eligibility, initiation and follow up. For formal PrEP, the General-Directorate for Health's PrEP guidelines checklist was used.

Results:

Until the end of May 2018, CheckpointLX had a total of 90 appointments for Wild PrEP, of which 64 (71%) were first time visits. As for the 380 service users referred to the NHS, most were Portuguese (N = 318, 84%), and the mean age was 31 (8.9) years old. Condomless sex in the last six months with partners of unknown HIV status was the most common eligibility criteria (N = 59, 83%).

Conclusions:

PrEP delivery should be complemented with effective information on the importance of immunization and education on safer practices of drug administration, in the scope of broader preventive sexual health care. Much remains to be done in Portugal to ensure that PrEP is available to those who need it the most. Offering PrEP at community clinics could be a first step.

Key messages:

- Condomless sex in the last six months with partners of unknown HIV status was the most common eligibility criteria for PrEP.
- PrEP delivery should be complemented with effective information on the importance of immunization and education on safer practices of drug administration.

Reality of trans-identity in Benin and social reactions: Analysis based on a national survey in 2017

Yolaine Glele Ahanhanzo

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Background:

Transgender individuals are a key population recognized transmission of sexually transmitted infections (STIs) and human immunodeficiency virus (HIV), with higher risks of infection. Adoption of risky behaviours would be strategies of coping to face psychological disorders related to the social consequences of gender transition. To address their specific health needs in Benin, this study describes transgenderism and social reactions.

Methods:

Through a cross sectional design, subjects were recruited by respondent-driven sampling from networks selected in the whole of the country in 2017. Subjects included were above 15 years old who identify themselves as transgender. Data was collected via questionnaires with variables related to the individual management of gender affirmation, social reactions, and risky behaviours.

Results:

A total of 326 transgender individuals were identified with a majority of subjects being originally of the male gender (89.57%). The average age was 24.13±4.88 with a strong representation of schoolchildren and students (36.50%). In 64.72% of the cases, the family was informed of the trans-identity. The overall attitude of the family was of acceptance/support in 7 cases out of 10. Stigmatization and discrimination are reported by 50% of the subjects and 59.02% have been subjected to at least one assault. Among these, half had no appeal initiative and the main reason would be the absence/non-knowledge of legal remedy. Sexual multi-partnership which is the most common risky behaviour occurred in 81.54% of the cases.

Conclusions:

Transgender people exist and constitute a population with specific needs in Benin. The services dedicated to this target must integrate the prevention of STIs/HIV but also legal, social and psychological support.

Key messages:

- Transgenderism in Benin mainly concerns young male subjects.
- Prevention programs should also be focused on social and psychological aspects to manage the identity transition that constitute a key step of shifting into risky behaviours.

Knowledge and sexual behaviors of transgender individuals faced with the risk of STI/HIV in Benin

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Introduction:

The issue of sexually transmitted infections (STIs) and Human Immunodeficiency Virus (HIV)/Acquired Immune Deficiency Syndrome (AIDS) cannot be solved without considering the transgender population. This research aims to describe the knowledge, attitudes and sexual behaviors of transgender individuals faced with the risk of STIs and HIV/AIDS in Benin.

Methods:

Transgender individuals were selected by respondent-driven sampling throughout the country in 2017. Included in this analysis were individuals who identified as transgender and adopted its mode of expression, aged 15 years and greater, and who gave their consent to participate.

Results:

A total of 308 transgender individuals were surveyed, of which 89.6% were of male gender at birth. The participants had a good level of knowledge in the matter of STI and HIV/AIDS. In fact, 99.9% among them cited at least one symptom of STIs; 95.1% cited the three main methods of transmission of HIV and 54% are aware the risk of sexual transmission of HIV is higher between men. Participants were more than 90% likely to declare a positive attitude to care for persons living with HIV (PLWHIV) or to share the same room with them (93.2%). Concerning sexual behaviors, the average age at the first sexual encounter as a transgender individual was 14 years old. During the last three months, transgender individuals declared three regular male partners on average. The usage of condoms during the last sexual intercourse was reported in 86.6% of cases. Knowledge of the serological status of the sexual partner (31.7%) and the loss of sensation induced by the condom (26.8%) constituted the main reasons of non-usage of condoms.

Conclusions:

Although adopting some risky sexual behavior, transgender individuals are a population that is relatively well informed and with favorable attitudes regarding STIs and HIV/AIDS. These factors are significant assets to be considered in the development of programs for STIs and HIV/AIDS control.

Key messages:

- Transgender individuals good level of knowledge is an asset for STIs/HIV control.
- Sexual multi-partnership seems to be common despite a good level of knowledge.

Trough community mobilization to better health for all Balkan's Roma

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Issue:

The Roma community in all Balkan countries faces a lot of barriers in the implementation of their health right. They face inequalities in healthcare, prejudices, stereotypes and informal payments, charged by health professionals. They also have lack of access to information about ongoing changes in the health sector. Because of lack of education, poverty or some traditional barriers, Roma usually delay on Doctors treatment or improperly used a medical therapy. Roma community also faced and with populism activities related to them who exist just on the paper, without implementation.

Description of the problem:

Implementation of Methodology, Social accountability and Legal Empowerment'' give visible results in improving Health rights of Roma community in Macedonia. In the last three years NGOs KHAM and ESE providing mentorship to the Roma NGOs in Romania and Bulgaria. Role of the NGOs is to created power balance between Roma community and Health Authorities, and addressing problems from local to national level. Trough Legal Empowerment community learn their rights, and trough Social accountability they demand there rights and looking for changes. After three years of work we have visible results and Roma movement for health rights in Balkan region.

Results:

Good practices from Macedonia was in Bulgaria and in Romania. Roma communities from Romania have progress in field of immunization of children and prenatal and antinatal care.In Bulgaria we have progress in early child development. For the very first time, Roma community sat together with Policy makers and with the arguments negotiated for better health. Details will be presented at the Conference.

Lessons:

Mentoring is excellent tool for sharing the good practice between NGOs where similarities are obvious. In fact, by acting together, more pressure can be placed on the authorities to bring better policies for Roma in the region.

Key messages:

- Knowledge is power.
- Only legally strengthened communities that collaborate with each other can make changes for themselves.

Understanding discrimination faced by transgender people in the health and social care settings

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Background:

This session reports on a literature review from a study aiming to identify whether there is a positive correlation between inclusive legal gender recognition procedures, and well-being of transgender people within the EU. The review explores socio-demographic/economic profiles of transgender people, and forms of discrimination faced.

Methods:

The review is based on 47 peer-reviewed articles and 11 grey literature reports, provides analysis concerning sociodemographic/economic positions of transgender people, and an overview of discrimination faced.

Results:

The focus is discrimination within health & social care, how this leads to unmet health needs and a lower sense of wellbeing within the trans population. Due to actual, or expected, discrimination, some trans individuals will not disclose their gender identity in a healthcare context, or may avoid using such services altogether. Mental health was a focus of many of the studies, with prevalence of depression, self-injury, and suicidal thoughts being higher for this group. Fewer studies reported on the physical health status, with some studies finding that transgender people had low health status. Studies suggest that professionals may treat trans people in an insensitive or inappropriate way, largely due to a lack of knowledge/ignorance, for example health & social care staff often had little knowledge of trans people and their health & wellbeing, how to appropriately address them, and how to support their care. Trans individuals may also be treated in a discriminatory way in the context of trans-specific healthcare, for e.g within a gender unit due to a non-binary gender identity.

Conclusions:

Discrimination has a negative impact on health & wellbeing, specifically mental health, mainly due to discrimination trans people face.This has a negative effect on actual/future health & well-being, as it translates into fear of seeking care, and postponing/avoiding care, due to actual or expected poor treatment.

Key messages:

- The review contributes to an evidence base to address discrimination faced by transgender people, however there is a lack of evidence found in the area of EU transgender health and wellbeing issues.
- The study seeks to confirm a positive correlation between inclusive LGR and well-being of transgender people in the EU, which can help contribute to improving their quality of life.

The clusters and frequencies of adverse social conditions amongst the homeless people

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Background:

A growing body of evidence identifies interconnected social indicators that can lead to homelessness. Several studies identify a catalogue of social disadvantages that starts from childhood and persist throughout the life course that leads to homelessness. Qualitative evidence indicates that their adverse childhood experiences(ACEs) and damage that occurred to them as children had major influences on their ability to negotiate their way through the education system, gain and sustain employment, make appropriate choices of social networks, and form and maintain healthy relationships as adults. However, very little research seeks to objectively investigate these issues. This study aims to use the cross-sectional study to document the cluster and frequency of adverse social conditions amongst the homeless people in North West England in 2019.

Methods:

The study design was cross-sectional. We used IBM SPSS 21, with a significance level set at $p < 0.05$, CI 95% to analyse the data.

Results:

The mean age was 39.12, range 21-64, 90.5% male. 52%($\chi2 =$ 33.4, df = 1, p = 0.001) described their health as poor, 90% ($\chi2 =$ 61.85, df = 2, p = 0.001) smoked cigarette daily, 83.3% ($\chi2 =$ 76.4, df = 3, p = 0.001) used drugs daily, 78.6% ($\chi2 =$ 13.7, df = 1, p = 0.001) saw a doctor in preceding 6 months, 63.4% ($\chi2 =$ 73.8, df = 3, p = 0.001) left school before age 16; 26.2% ($\chi2 =$ 37.7, df = 3, p = 0.001) left school at 16, 11.9% ($\chi2 =$ 33.1, df = 10, p = 0.001) encounterd criminal justice system at the age of 11, 28.6% ($\chi2 =$ 60.8, df = 8, p = 0.001) had reprimand/caution or conviction at 17.

ACES: 57% ($\chi2 =$ 34.7, df = 3, p = 0.001) experienced humiliation by adults in their household; 54% ($\chi2 =$ 30.7, df = 3, p = 0.001) threatening behaviour, 50% ($\chi2 =$ 26.0, df = 3, p = 0.001) physical violence in their household.

Conclusions:

These early stage preliminary results indicate that adverse social circumstances that occur in childhood are disproportionately represented in homeless population.

Key messages:

- Homelessness is more complex than the absence of accomodation.
- Adverse social circumstances that occur in childhood are disproportionately represented in homeless population.

Are Roma people exposed to NCD? Modifiable risk factors in a rural Roma community from Romania

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Background:

Knowing the prevalence of modifiable risk factors for noncommunicable diseases is the first step to plan effective public health interventions. The study aims to identify the prevalence and distribution of risk factors of non-communicable diseases (NCD) among adult Roma population in a rural community.

Methods:

Using a tool based on the WHO stepwise approach, a cross-sectional study was carried out among a sample 116 adults aged 18-85 years (52 male and 64 female), from a rural community with 800 Roma members. The study instrument included questions to record behavioral risk factors (smoking behavior, alcohol drinking, diet and physical activity and also data on anthropometry and value of blood pressure). Descriptive statistics methods were used to analyze the data.

Results:

The smoking prevalence was 35,3% (95%CI, 27.0 to 44.3,) higher for men (49,9%, 95%CI, 36,6-63,4%) than for women (23,4%, 95%CI, 14.2-34,9), higher than the smoking prevalence recorded for Romanian population in 2017 Eurobarometer study. Prevalence of obesity (body mass index $\geq$30 kg/m[2]) was observed to be high among Roma respondents 34,48% (95% CI, 26,26 to 43,47) compared with self-reported obesity rates among adults in Romania (9%, Eurostat, EHIS 2014). The observed proportion of obesity is similar for both genders, but central obesity was lower for men compared to women (57,4% to 79.6%). There was observed a higher proportion of people declaring they eat fruits less than once on a week (25%, 95% CI, 17,7 to 37,4) and adding salt before tasting the dishes (58,6%). Most of interviewed people have a sedentary lifestyle with less than 30 minutes of physical activity per day.

Conclusions:

The high prevalence of risk factors for NCD in this rural Roma community indicates the likelihood of a high future burden of illness.

Key messages:

- There is a need for both further research into the health of Roma people regarding NCD and prevention interventions to address behavioral risk factors for NCD.
- Knowing the prevalence of modifiable risk factors for noncommunicable diseases is the first step to plan effective public health interventions.

DW Public health policy

Effects of Private Health Insurance on Unmet Medical Experience in Chronic disease Patients

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Background:

Chronic patients are called 'long-term disorders,' as they last for more than a year. They need continuous care, so health care through easily accessible medical institutions such as primary care is needed for them. In South Korea, however, they are mostly managed through secondary medical service systems, such as hospitals that are difficult to access. This causes them to increase their own burden rate, limiting their ongoing management of the chronic disease. However, it is known that Korea's private health insurance policy affects the use of medical services, their own burden rate and reduces the unmet medical experience. Therefore this study aims to analyze the impact of the Korean chronic disease on private insurance subscription and unmet medical experience.

Methods:

Using the 2014 survey data of the Korea Welfare Panel, the final analysis of the study was 4,243 households with chronic diseases among 6,581 households. The independent variable of this study is whether private health insurance is subscribed or not, and the dependent variable is unmet medical experience due to economic factors. The analysis method used frequency analysis and logistic regression. [Use SPss 22 for analysis]

Results:

- 1,417(33.4%) of households subscribed to private insurance. The figure is significantly lower than the country's reported private health insurance subscription rate (72.6%).
- Based on the median income of 60 percent of household income, high-income households have lower unmet medical experience than low-income households.
- In the case of unsubscribed private health insurance among the people with chronic diseases, the unmet medical experience was 1.921 times higher than that of those who signed up.

Conclusions:

- In order to reduce the burden on chronic patients, the government needs to strengthen the primary medical care system.
- Reinforce connectivity with private insurance through public financial support of national health insurance.

Key messages:

- Chronic disease.
- Private health insurance.

Barriers by professionals in primary care in discussing children of substance abusing parents

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Background:

Children of substance abusing parents are more at risk to develop addiction or psychiatric problems than children of healthy parents. It is therefore important to detect in an early stage, which consequences the problems of the parents might have on the child. Previous research shows that within addiction care children of substance abusing parents are not always in the picture. However for early detection it is at least as important to discuss the influence of parental substance abuse on the children in primary care: early detection of problems in children contributes in starting prevention or treatment programs in a timely manner, so that the chance that a child grows up safely will increase.

Aim:

To gain insight in the barriers of professionals working in primary care and public health in bringing up the topic of children in a conversation with substance abusing parents.

Methods:

A qualitative design was used. 15 interviews have been conducted with participants consisting of primary care and public health professionals in the Netherlands. By discussing several themes, information on the barriers experienced by the professionals were obtained, written down and analyzed.

Results:

The results are being analyzed at this moment, but will be ready to present at the congres in November. The interviews will show which barriers are experienced by the participants. Based on literature the expectation is that the barriers can be divided in three categories: barriers on the content of care, moral dilemma's and organizational barriers.

Conclusions:

The results of this study will provide insight in the barriers of professionals in primary and public health on discussing the circumstances of children of substance abusing parents. Knowing these barriers might serve as input for interventions to remove these barriers and for recommendations to improve so that children of substance abusing parents receive (preventive) care earlier.

Key messages:

- Gain insight in barries of professionals in primary care and public health on discussing circumstances of children of substance abusing parents.
- input for interventions so that children of substance abusing parents receive care earlier.

Legal policy challenges in withdrawal of dialysis treatment in Japan

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Issue/problem:

In 2017, Japanese dialysis patients and kidney transplant cases numbered roughly 330,000 and 1,700, respectively. In March 2019, a patient died after a physician terminated her kidney dialysis at a hospital in Tokyo. The Tokyo Metropolitan Government and the Japanese Society for Dialysis Therapy (JSDT) investigated the case, questioning the patient's terminal status and desire to withdraw her request to terminate dialysis.

Description of the problem:

No Japanese law addresses treatment withdrawal, but several court decisions and the Ministry of Health, Labor and Welfare's process guidelines and JSDT guidelines address treatment withdrawal from terminal patients. We examined relevant court decisions and guidelines, identifying three legal policy issues that may impact legal policy discussions on treatment withdrawal in other countries, regardless of the enactment status of such laws.

Results:

First, the patient was not ''terminally ill'' as defined by the court rulings and guidelines. Second, a clear decision based on appropriate informed consent from the patient seemed absent, violating the court rulings and guidelines. Third, the physician's judgment of patient competency for decision-making may have been missing.

Lessons:

We considered problems beyond the court rulings and guidelines by focusing on the patient's right to self-determination and treatment refusal in other countries. The Patient Self-Determination Act and the Patient's Bill of Rights (US) as well as court rulings and the NHS Charter (UK) guarantee such rights, and collectively enable competent patients in the US, UK, and elsewhere to refuse dialysis even if they are not terminal. Japanese legislation does not guarantee such patient rights or the explicit allowance/prohibition of treatment withdrawal, regardless of the patient's terminal status; enactment of such laws should be considered.

Key messages:

- We identified legal ambiguity due to a lack of the patient's right to both self-determination and treatment refusal.
- This could impact the international discussion on dialysis treatment withdrawal.

A discourse network analysis of the public media debate on the UK Soft Drinks Industry Levy

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Background:

On 6th April 2018, the UK Government introduced the Soft Drinks Industry Levy (SDIL) as a policy designed to reduce population level sugar consumption and related illnesses. Given that the successful introduction of upstream food and nutrition policies is a highly political enterprise involving multiple interested parties, understanding the complex network of stakeholders seeking to influence such policy decisions is imperative.

Methods:

Media content analysis was employed to build a data set of relevant articles from UK national newspapers. Articles were analysed to identify stakeholder agreement or disagreement with defined concept statements. We used discourse network analysis to produce visual representations of the stakeholder network and coalitions evident in the debate, leading up to and following the announcement of the SDIL.

Results:

We identified 3,883 statements made by 214 individuals from 176 organisations, relating to 47 concepts. Visualisations revealed a complex network of stakeholders with two discourse coalitions. Polarisation arose from 3 factors: (i) differences in political ideology; (ii) position on the specific policy option; (iii) interpretation of the evidence. Industry stakeholders appeared less united before the SDIL announcement. Some industry actors appeared in the supportive coalition, possibly due to the use of corporate social responsibility rhetoric. Jamie Oliver was a dominant supportive stakeholder, suggestive of his role as a policy entrepreneur.

Conclusions:

This study illustrates the complexity of the network of stakeholders involved in the public debate on food policies such as sugar tax and the SDIL. Public health advocates seeking to gain support for future upstream regulation to promote population health would benefit from tailoring their communication to take advantage of sources of polarisation. Vocal celebrity policy entrepreneurs may be instrumental to facilitate alignment of stakeholders around a clear ideology.

Key messages:

- This study provides a novel insight into the network of stakeholders involved in public debates on food policies.
- Public health advocates may benefit by identifying and aligning with a clear ideology.

A comparison of stakeholder networks across two pricing policy debates using discourse analysis

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Background:

Public health policy development is subject to a large number of stakeholders seeking to influence government thinking on policy options. One approach is via the news media. We compare the competing discourse coalitions evident in the UK public debate across two pricing policies, Minimum Unit Pricing (MUP) for alcohol and the Soft Drinks Industry Levy (SDIL).

Methods:

Existing discourse network analyses (DNA) for MUP and SDIL were harmonised in Visone to allow direct comparison. We applied a common tie-weight threshold to reduce ties to robust argumentative similarities and to maximise the identification of both network structures. We used network measures (size, density and EI index) to compare the two networks and principal coalitions.

Results:

Both networks involve a similar range of stakeholder types and form two discourse coalitions representing proponents and opponents of the policies. The SDIL network is larger, particularly the proponents coalition with over three times as many nodes and a lower EI index. Both networks show tight discourse coalitions of manufactures and commercial analysts acting in opposition to policy supporters. The only actors that appear in both debates are politicians, government advisors, commercial analysts and supermarkets. While public health actors appear in both debates they appear siloed in their interests.

Conclusions:

DNA enabled direct comparison of the discourse coalitions across two highly contested pricing policy debates, visualising the complex network of actors and relationships operating to influence policy-making via the media. Use of comparative DNA across policy debates shows promise for better understanding the common tactics of different unhealthy commodity industries (UCIs) to disrupt public health policies. Public health actors could improve their response to UCIs by seeking to work across policy and commodity arenas.

Key messages:

- We compared the competing discourse coalitions across two pricing policy debates, MUP and SDIL.
- Public health advocates could improve their response by working across policy arenas.

Optimising message framing to advance cancer prevention pricing interventions in the UK and US

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Background:

One-third of the burden of cancer is associated with four health harming behaviours - tobacco use, alcohol consumption, poor diet and physical inactivity. The growing evidence base supporting price-related policies to curb over consumption is of interest to governments globally. However, implementation requires public and policy-maker support. The aim of this study is to enhance our understanding of the features of message framing that influence public support for price-related policies in relation to tobacco, alcohol, and sugar.

Methods:

We conducted 18 semi-structured interviews (9 UK and 9 USA) exploring knowledge, attitudes, and beliefs of 4 price policies in relation to tobacco, alcohol and sugar. Interviewees included cancer policy advocates, cancer survivors and members of the public. We used NVivo 12 to organise the data for inductive and deductive thematic analysis.

Results:

Common supportive features included: (i) highlighting the health benefit (eg reduced cancer risk), arising from impact on purchasing behaviour; (ii) indirectly making the health harm associated with consumption clear. Common unsupportive features included: (i) policy effectiveness will depend on size of the financial penalty and consumer response; (ii) such policies are unfair on sensible consumers and potentially regressive. Interviewees were more supportive of price-related policies for products containing tobacco where they perceived a stronger association with cancer risk.

Conclusions:

This study reveals important differences in levels of persuasiveness arising from the framing of messages to promote price-related policies. The results informed the identification of 4 frames to be tested in a multi-factorial quantitative study, currently under way. These frames can be characterised as: F1 - To reduce the financial strain on healthcare systems; F2 - For the protection of children; F3 - To reduce cancer risk; and F4 - To reduce the risk of other non-communicable diseases.

Key messages:

- Tailoring the framing of price-related policies in relation to the product they are applied to may increase public acceptability.
- This may in turn facilitate their implementation.

Feasability of a regional assessment of needs for palliative care

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Objective:

The coverage of need for palliative care is in the heart of national and local concerns. This feasibility study of an assessment of needs from SNDS data was done to check if this type of data permit to obtain a diagnosis of the management of the need and how measurement accuracy SNDS data used in the valuation model may be a decision-making tool.

Study design:

In this observational descriptive and analytical retrospective cohort study, the use of palliative care was identified by a code ''palliative care'' when there was a contact while a sliding twelve-month period before death with an establishment of care in France.

Patients: Patients dead in 2014 residing in Hauts-de-France were included if causes of death were identical to a defined list of diseases.

Methods:

Factors influences on palliative care access was analysed by logistic regression. Among other analyzes, survival was studied by cox model.

Results:

In medicine obstetric surgery, 28,4% of the 37502 insured adults had palliative care. For the adults, palliative care access was multipied by a factor of 0.94 ($p = 0.02798$) when men, 0.78 ($p = 0.00483$) with AME or CMU, 0.97 ($p < 2e\text{-}16$) with age, 0.90 ($p < 2e\text{-}16$) with the increase of the deprivation index, 1,01 ($p < 2e\text{-}16$) with interventional act and instantaneous death rate was multiplied by a factor of 1,0035 ($p < 2e\text{-}16$) with the use of palliative care.

Conclusions:

The estimation model of the need has probably induced a selection bias. The lack of code in primary care, the modality to be authorized to offer palliative care and the coding advocated by the health insurance have probably induced a ranking bias. Those results consistent with the literature have suggested that the SNDS was reliable for this type of assessment.

Key messages:

- Coverage of need for palliative care was identified.
- The SNDS (French Insurance Database) was reliable for this type of assessment.

Are Cypriot community pharmacists ready to offer hypertension screening interventions? A pilot study

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Background:

Cardiovascular disease (CVD) is the leading cause of death in Europe. One of the most essential CVD risk factors is uncontrolled hypertension (HP), thus the management of HP can lead to lower CVD risk. Pharmacists (PHS) can actively contribute to various public health functions such as prevention and early detection of individuals with increased blood pressure (BP). This study aimed to assess the feasibility of a pharmacy-led HP screening programme in Cyprus.

Methods:

The study was conducted in one community pharmacy in Nicosia. The sample ($n = 87$) was randomly selected. Inclusion criteria were adults, without any CVD, diabetes or hypercholesterolemia in addition to pregnant women. BP measurements of the participants (PS) were taken. PS whose BP reading was high-normal were advised to measure their BP regularly, those whose BP reading was 140-159/90-99 mmHg were offered a home BP monitoring (HBPM) to confirm the diagnosis of HP and those whose BP reading was higher than 160/100 mmHg were referred to a cardiologist.

Results:

68 PS (78%) had normal BP, 14 PS (16%) were detected with high normal BP while 5 (6%) were identified with a BP reading higher than 140/90mmHg. 2 PS were diagnosed with HP grade 2 after PHS's referral to a cardiologist while 2 PS were diagnosed with HP grade 1 after the HBPM. An estimation of a CVD risk conducted indicated that 84% ($n = 73$) of the sample appeared to have no risk at all, 12% ($n = 10$) had low risk, 3% ($n = 3$) had a moderate risk and 2% ($n = 1$) showed moderate to high risk.

Conclusions:

The fact that 4 PS were diagnosed with HP and 14 more were given lifestyle advice can indicate Cypriot PHS' potential contribution to the prevention and early diagnosis of HP. As the sample was small and the results may not be generalised, similar programmes should be conducted with a higher number of PHS and PS in different cities in Cyprus to identify replication of the results.

Key messages:

- Cypriot pharmacists have the potential to screen individuals with high blood pressure.
- Pharmacists' intervention can lead to early diagnosis of hypertension.

Actions to improve chronic heart failure management in Paris and its suburbs, preliminary results

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Background:

Chronic Heart Failure treatment requires close collaboration between multiple health professionals (hospitals, general practitionners, cardiologists, nurses, pharmacists,...). Guidelines for management of chronic heart failure patients after hospitalization for heart failure were published in France in 2014.

In Paris and its suburbs (Ile de France) several indicators show that improvement of processes is required especially regarding linkage between hospital and ambulatory care (for example admission rate in emergency unit was 59,7% in 2014).

Actions:

Since 2015 Regional Health Agency and Social Insurance have conducted several actions to improve patients care pathway: feed back to providers on their own results, support patients after hospital discharge, commitment of several hospitals to organize meetings with field professionals, setting up semi-urgent consultations in hospitals, bundled payment experience...

Preliminary Results:

Indicators evolution from 2014 to 2017 is favorable for rate of admission in emergency unit (57,8% versus 59,7%), 6 months mortality (20,7% versus 23,1%), hospital readmission 6 months after index admission (24,4% versus 25,2%), but unfavorable for ambulatory clinical follow up rates (general practitionner consultation within fourteen days after hospital discharge (46,1% versus 52,5%), cardiologist consultation within sixty days after hospital discharge (47,1% versus 52,8%).

Conclusions:

It is too early to assess the impact of each action and it will be difficult to conclude, because of interaction between actions. The evolution of outcome care indicators is satisfactory, which suggests the interest of acting on a whole care process. The worsening clinical follow up indicators leads to wonder about access to health care and requires an analysis by territory to adapt the actions.

Key messages:

- Actions to improve chronic heart failure management in Paris and its suburbs firsts outcomes are satisfactory.
- Acction adaptations are necessary and should be assessed in 2019/2020.

Intervention research partnerships: enablers for activating health in all policies approach?

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Introduction:

Action on the determinants of health and equity involves the participation of all sectors, including non-health sectors. Understanding the opportunities and constraints to engage in the complex issue of health inequalities requires opening the black box of policy making. It also requires close interaction between field actors and researchers. This paper will aim to analyze the modalities of collaboration between researchers and field actors in the service of knowledge sharing, within the GREENH-City project.

Methods:

The GREENH-City project was built in an interdisciplinary and intersectoral manner and involves close collaboration with the WHO French Healthy Cities Network (FHCN). Its objective is to characterize the most promising health interventions in all policies at the city level to promote equity through green space policies. Based on the knowledge sharing model and the theory of diffusion of innovations, we will analyze how this research allows initiating collaborations between the different municipal sectors on health issues.

Results:

The intervention nature of the project seems to help the dissemination of collaborations, particularly between health services and green space services within the cities of the FHCN. The analysis, using theoretical models, of the body of empirical data collected from cities will make it possible to identify the levers and collateral effects activated by the research project.

Discussion:

The GREENH-City project was built on the basis of an interventional research framework. This choice was made precisely because of the interaction it induces between researchers and practice environments. Initial empirical results suggest that it promotes the dissemination of knowledge, a necessary first step in the evolution of practices. Indeed, the effective appropriation of research results can only be assessed in the long term and must take into account the contextual elements specific to each FHCN involved in the research.

Key messages:

- Implementation of interventional research helps to engage fields collaborations.
- Health in all policies may be supported by a research project at the local level.

Medical students' involvement in health policy: current focus and trend

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Background:

European Medical Students' Association (EMSA) and International Federation of Medical Students' Associations (IFMSA) are two leading student organizations advocating for better health in Europe and the World. How student organizations support global public health policy and particularly which topics students place greater emphasis on are not documented, although it is crucial to understand their involvement and areas of interest.

Methods:

Data on the valid policy documents of the last three years until April 2019 were retrieved from the official websites of EMSA and IFMSA. These documents were categorized using abstract submission tracks of the 12th European Public Health Conference.

Results:

Twenty-nine policy documents were retrieved, ten of which were from EMSA and 19 from IFMSA. Fourteen of all 22 abstract submission tracks (63.6%) were covered by these policy documents. Of all policy documents, 20.7% fell under the track of 'infectious diseases, preparedness and vaccines'. Most commonly advocated topic in policy documents of IFMSA was infectious diseases and vaccines, whereas that of EMSA was healthy living and health promotion.

Conclusions:

Medical students often take part in health policy by conveying their perspectives and calling other stakeholders to action via their policy documents. Policy documents of IFMSA were more related to global health challenges such as infectious diseases while special concerns in Europe such as healthy living and health promotion dominated EMSA's policies. In the near future, more student advocacy work on climate change, noncommunicable diseases and primary health care would be expected in accordance with 'ten threats to global health in 2019' announced by the World Health Organization.

Key messages:

- Medical student organizations, EMSA and IFMSA, are important stakeholders in health policy.
- The focus of their policy documents differs, and this trend is influenced by changing public health challenges in Europe and the World.

Energy policy as a social determinant of Australian health equity

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Background:

Intersectoral action on social determinants of health to reduce health inequities requires policy research beyond the usual social and human services. We ask how Australian energy policy affects health equity.

Methods:

Document analysis and policy case studies on how goals, objectives and strategies of all Australian energy policies address equity.

Results:

Energy policy affects health via risk from unreliable energy; difficult transitions to renewables; disproportionate effects on poorer people faced with high energy bills versus other basics; ecological degradation; cost pressures on businesses and governments; job losses and policy paralysis about renewable energy and climate change. Policy features subsidies for the disadvantaged; privatisation and artificial markets; differing geographical distribution of resources and high level political conflict about whether it can deliver on 3, or only 2, of the 'energy trilemma' of reliability, affordability and ecological sustainability. Mining, industrial and political interests, powerful enough to orchestrate the downfall of Australian prime ministers, actively close policy links between health, climate change and energy. Bridging energy and health policy requires political support for market solutions involving renewables; community generation of renewable energy; solutions for rural and remote areas; and global treaties. Intergenerational equity is a strong policy lever.

Conclusions:

Health in All Policies approaches can creatively engage with the language and concepts of energy policy via the daily conditions of living, inequity and climate change. When it is difficult to engage, researchers can connect with non-government organisations who bridge sectors through simultaneous advocacy for equitable health, climate and energy policies.

Key messages:

- Powerful interests burn bridges between health equity and energy policy.
- Local and global policy levers harmonising terminology differences build bridges between energy, climate change and health equity.

Basic problems in conducting a general preventive review of persons over 18 years of age in Bulgaria

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Background:

In Bulgaria, following the reforms in healthcare, the Health insurance model and the role of GPs have been adopted as a key figure for primary outpatient medical care. Part of the obligations of the GPs for the implementation of the individual contracts with RHIF are also the preventive examinations of the mandatory health-insured persons over the age of 18 and the formation of risk groups of the population. Since 2006, the overall prophylactic review is mandatory for all health insured persons over the age of 18, regardless of their health status. It includes a core set of activities and studies that identify both people with disabilities and patients at increased risk of developing certain socially significant diseases such as cardiovascular, malignancies and diabetes.

Material and methods:

Data were collected by documents review and direct individual self-administered questionnaire among 513 persons from the Pleven region and 229 GPs from three districts in the country.

Results:

Despite the mandatory nature of general checkup for all persons over '18, annually recognizes low range (from 35.8 to 45%). It was found that people over 65 who have chronic diseases more regularly visit the GP for check-up. The main reasons for the low population coverage are: lack of time and motivation of GPs; high relative share of persons with discontinued health insurance rights (over 20%); insufficient awareness and dissatisfaction of the mandatory health insured persons about mandatory prophylactic examinations. Of the respondents, 48% do not know what activities are involved, and 39% consider that the reviews are carried out formally.

Conclusions:

Prevention of health-insured persons over 18 years of age is low in scope and is mostly opportunistic. In order to optimize the health and economic impact of the prophylactic review program, it is appropriate to provide for motivation measures for both GPs and those subject to the scope.

Key messages:

- In Bulgaria, the range of persons over 18 years old with prophylactic examinations is low.
- Prophylaxis of the persons covered is mostly opportunistic.

Development of an evidence-based reference framework for care coordination interventions in France

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Background:

Today, the high variability of practices, the lack of common definitions and underlying concepts increases the existing difficulty to standardise, to replicate, to transpose and to assess the coordinated care. This heterogeneity makes very difficult the evaluation of performance of care coordination. The aim of the first phase of Epock study is to develop a theoretical framework for care coordination interventions in the French health system that can be used for description, implementation and evaluation of care coordination intervention in any clinical situation.

Methods:

A review of systematic reviews on care coordination interventions was conducted to identify relevant models and constitutive elements of the expected reference framework for care coordination intervention. These elements resulting from the literature review have been grouped by themes, prioritised and selected by a structured consensus method (Nominal Group Technique).

Results:

Four dimensions of care coordination were identified: (a) Underlying conceptual models; (b) Care organization, care and facilitation activities; (c) Actors and tools; and (d) Effects classified according to WHO's quality of care dimensions. Among these dimensions, 4 to 28 elements have been selected to build the reference components of care coordination in France.

Conclusions:

This first reference framework for care coordination interventions in France will be used during the Epock project phase 2 as a basis for comparing practices observed in oncology. This framework could be used as of now for: practice by helping to develop job descriptions and training programmes for future care coordination professionals; piloting to measure care coordination (by developing indicators for care coordination); and research, to evaluate the impact of care coordination interventions.

Key messages:

- Epock is a challenging French national research project for the development of an evidence-based reference framework for cancer care coordination interventions considered as a complex intervention.
- Epock will provide key elements for cancer care coordination intervention effective implementations and for designing further medico-economic evaluation of cancer care coordination intervention impact.

Evaluation of the health pathway through the patient-experience in the French program PAERPA

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The patient-experience is an emerging concept in research and medico-social action, and its consideration in the development of care pathways is encouraged (e.g. 'Ma Santé 2020' national plan in France). In addition, the patient-experience of the elderly subject has specific dimensions and his collection presents difficulties insufficiently explored. PAERPA (elderly people at risk of loss of autonomy), French national experiment for the care of frail elderly patients, offers an opportunity to return to these issues.

The objective of this study, mandated by the ARS of Hauts-de-France, was to collect the experience of the elderly PAERPA. Faced with the difficulties of current methodologies, several methodological approaches have been combined: semi-structured individual interviews face-to-face or by telephone, dedicated questionnaire. In addition, a specific grid was developed to explore the home-based patient experience, including seven dimensions of the patient-experience identified in the literature. This study was conducted in the second half of 2018 (3 years and a half of the start of the project).

The experience of 43 seniors and / or caregivers was collected. Patients PAERPA are generally satisfied with their care but they have difficulties in making the link between their care and the actors and devices specific to PAEPRA experimentation. Human connection and listening seem essential for the elderly patients included. Other dimensions, such as stakeholder coordination, remain controversial and more difficult to grasp. Methodologically, the particular situation of seniors, such as sensory or memory disorders, requires a major adaptation of the survey tools.

In PAERPA, the patient-experience of the frail elderly subject passes mainly through the feeling of a human connection. Current methodologies do not seem fully adapted to collectively capture the experience of frail elderly patients.

Key messages:

- Evaluating the patient-experience to improve the health pathway is possible and necessary through a qualitative collection, regularly, in itinere.
- The peculiarities of older people often require the participation of carers, who need to be involved in the assessment of the patient-experience and raised awareness.

Colorectal Cancer Screening Programme: Algarve Preliminary data

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Problem:

The burden of disease for oncological problems is significant in Portugal. Population-based screenings, such as colorectal cancer screening (CCS) with faecal occult blood tests (FIT) is a priority program to reduce the burden of disease and a cost-effectiveness measure.

Description problem:

Algarve CCS started in 2017,to early detect colorectal cancer reducing morbidity and mortality. Screening strategy to detect and remove cancer precursors (adenomas) and early cancer detection with less invasive treatment using a non-invasive stool test was selected. A quantitative faecal immunochemical test for haemoglobin (FIT) with higher sensitivity for adenoma and cancer, specific for human globin with no dietary restriction, with a single sample screening is considered a test with higher participation. Target population all gender from 50 to 75 are invited to participate in the CCS by letter. Screening interval is 2 years and FIT cut-off- 117 (ng Hb/mL). Software was used to manage all CCS. Health units distribute the test and a flyer. All FIT-positive were invited to do a full colonoscopy at University Hospital.

Results:

A preliminary descriptive analysis (2017/2019) was made. After exclusions 25017 of target population participate 34,4%(n = 8594),27.5%(n = 6883) submitted it for analysis, 3.9% (n = 266) had positive FIT and were invited for a full colonoscopy with 57.5% (n = 153)participation rate. Cancer detection was 0.9‰ and adenomas detection rate was 9.9%. FIT positive with colonoscopy 3.9% (n = 6) had carcinoma and 44.4% (n = 68) had adenoma.

Lessons:

Some operational changes were made to improve participants and professionals adherence to CCS. Pathology observed in the positive cases, reinforce the need to implement strategies to increase literacy, raise public awareness, keep the screening test and improve accessibility of health facilities.

Key messages:

- The importance of a colorectal cancer early diagnosis prevent aggressive interventions in a precancerous phase.
- The importance of a colorectal cancer early diagnosis improves survival and population quality of life.

Alcohol and cancer: risk perception among the French population

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In 2015, in France, 41 000 deaths were estimated to be attributable to alcohol consumption including 16 000 deaths from cancer. 8% of all new cancer cases were attributable to alcohol. The French National Cancer Institute and Sante Public France have conducted a study on knowledge and opinions of the French population on the risks factors attributed to cancer, including alcohol consumption.

Data came from the 2015 Barometre Cancer survey, a random cross-sectional telephone survey of the French general population (n = 3771 individuals aged 15-85 years). About 88% of the respondents felt well informed about the risks of alcohol. Opinions show an important risk denial and risk relativization: e.g, 85% agreed that the principal risk with alcohol consumption are traffic accidents or violence and 75% agreed that soda and hamburgers are as bad as alcohol for the health. Those perception were higher among men, older respondents, daily drinking consumers and those of low socioeconomic status. Population's beliefs to deny the cancer risks due to alcohol use are common in France.

These results can be used to redesign public information about the risks of alcohol.

Key messages:

- Population's beliefs to deny the cancer risks due to alcohol use are common in France.
- It's necessary to adress public information about the risks of alcohol.

Algarve Cervical Cancer Screening Programme

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Issue:

Cervical Cancer (CC) is the 7th most frequent and the 2nd most common in women. The standardized mortality rate, in Portugal is 2.3/100000 inhabitants and Algarve is the region with highest rate, 4.9/100000.

Description:

Programme started in 2010. Population-based screening programme can reduce incidence, mortality and morbidity with an early diagnosis, preventing aggressive interventions in precancerous phase, improving survival and life quality. Target population, woman age 25-64.are invited to primary test liquid-based cytology (ThinPrep) every 3 years. Health Centres are responsible for select, invite, collect samples and send to Hospital laboratory. For positives, a cervical pathology consultation is required. National Guidelines now indicates DNA testing for human papillomavirus (HPV) as primary screening test, each 5 years, to woman age 25 to 60 and screening program changes will be implemented in 2019 with improved response time and lower cost.

Results:

Since 2010 the target population has increased 12% every 2 years and the adhesion rate increased ≈68% and≈108%. Nevertheless the 3rd cycle has showed 10,8% (17.975) adhesion rate. Most women 16.112 (89.6%) had a negative diagnosis, 503 (2,8%) is ASC-US + (HPV test), and 761(4,2%) had a cervical pathology consultation. From those, 117 (15.4%) had a LSIL, 69 (9,1%) HSIL and 2(0,3%) cancer. Cancer detection rate is 0,1 ‰.

Lessons:

The small adhesion rate particularly by aged women, the users unfriendly Information System and direct screening health units management are some of the issues that requires improvement. Also population literacy, self-sampling vaginal fluid and clinical meetings are some of the options to improve screening program.

Key messages:

- Cervical Cancer early diagnosis prevent aggressive interventions in a precancerous phase, improves survival and life quality.
- Better access and health communication are major points in screening programs.

Predictors of a high work participation in the flexi-job scheme: a regional Danish cohort study

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Background:

In Denmark, people with permanent and significant reduced work capacity can be assigned to a flexi-job (FJ) scheme. In 2013, the social security policy for FJ was reformed in order to improve the chances for employment for people with reduced work capacity. In a Danish cohort study from the North Denmark Region we aimed to describe work participation in the flexi-job scheme before and after the reform. Furthermore, we described the associations between employment in the flexi-job scheme and predictors such as sociodemographic factors, healthcare use, and work participation before assignment.

Methods:

The study population included individuals assigned to the FJ scheme between 2010 and 2015 in the North Denmark Region. The study population was followed until leaving the FJ scheme or end of follow up (September 2017). Baseline information included data on sex, age, place of residence, number of contacts to specialized healthcare, and number of working weeks five years before. Work participation score (WPS) was defined as number of working weeks divided with the total number of weeks in the FJ scheme. High WPS was defined as above the median. We used a logistic regression model to study associations between baseline characteristics and high WPS.

Results:

A total of 4,668 people were included in the study. The overall median WPS were 73% (interquartile range (IQR) 42% - 90%). Policy changes (OR 1.40, 95% confidence interval (CI): 1.24 - 1.59), male sex (OR 1.16, CI:1.03 - 1.31), young age (OR 1.45, CI: 1.17 - 1.80), urban living (OR 1.22, CI:1.03 - 1.46), no contact to specialized healthcare (OR 1.54, CI: 1.21 - 1.99), and a strong association to the labor market before awarded FJ (OR 4.25, CI: 3.34 - 5.41) were all predictors of a high WPS during FJ-scheme.

Conclusions:

Policy changes increased work participation in the FJ-scheme. However, the strongest predictor of a high WPS for people awarded FJ was the degree of work participation before the scheme.

Key messages:

- Several factors had impact on work participation in a flexi-job scheme.
- The flexi-job scheme might be insufficient to secure employment for people with prior weak affiliation to the labor market.

Adolescents' alcohol use after liberalisation of alcohol sales in Finland in 2018

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Background:

Adolescents' alcohol use and binge drinking decreased in Finland since 2001 while the proportion of those who did not drink, increased until 2017. The 2018 Alcohol Act (entered 1 March) allowed retail stores sell all alcoholic beverages containing up to 5.5% alcohol by volume (previously 4.7%, beer and cider). Alcopops, assumed popular among adolescents, are now available in retail stores for those ≥18 years. We study changes in adolescents' alcohol use and type of alcohol beverages until 2019.

Methods:

Data from Adolescent Health and Lifestyle Survey (AHLS) has been collected biennially from nationally representative samples of 12-, 14-, 16- and 18-year-old Finnish adolescents. The data collection of the 2019 survey is going on and continues until June. Approximately two thirds of the expected responses (N = 2666) has arrived by the end April.

Results:

According to our preliminary results, among girls abstinence slightly decreased from 2017 to 2019 and the increasing trend levelled off. Among boys, abstinence stayed at the same level from 2017 to 2019 among 12- and 14-year olds, decreased among 16-year-olds and increased among 18-year-olds. The decrease in monthly alcohol use had levelled off in 2017 and the use stayed approximately on the same level in 2019 as in 2017. Changes in type of alcoholic beverages will be ready in June and will be presented in the conference.

Conclusions:

One year after the liberalisation of the Alcohol Act, no increase in adolescent alcohol use was observed, but the decreasing trend seems to have levelled off, while a small decrease in the proportion of those who do not drink at all seems likely.

Key messages:

- In a short run under-aged alcohol use has not increased after the liberalisation of the Alcohol Act.
- However, abstinence has slightly decreased.

Regional variations of amenable mortality rate in Latvia

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Background:

Death can be considered as amenable if all or most deaths from that cause (at certain age group if appropriate) could be avoided through optimal quality of health care. Amenable mortality is one of indicators to use for assessing health system performance and outcome.

Methods:

For amenable death causes using list of diseases and conditions from Office for National Statistics of United Kingdom (used by Eurostat). Calculation of amenable death rate (per 100000 population) for ages 0 to 74 years at regional level (six statistical regions) for time period 2015-2017, direct age-standardization to the overall national population. Results accompanied by confidence intervals (95%).

Results:

There is a slight decline in amenable mortality of Latvia at national level over the period 2015-2017. Amenable death rate of Latvia in 2017 was 309 per 100 000 (95% CI, 308.95 - 309.05). Death rates at regional level varies from 274.34 (274.23 - 274.44) in Pieriga region to 375.49 (375.37 - 375.62) per 100 000 in Latgale region. There are no significant changes in ranking of regions for three years period.

Conclusions:

Results shows that there are differences of amenable mortality rates between regions of Latvia. There are health inequalities between regions: Pieriga region show the best health care services performance, while Latgale displays the worst performance. There is field for deeper analysis and find better interventions for improvements at national level and reducing variability between regions.

Key messages:

- There are regional variations of amenable mortality in Latvia.
- Regional variations show places to reduce health inequality.

1st European Academy for Healthcare Leaders: high training on leadership to manage health systems

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Background:

Nowadays having leadership skills is critical to manage healthcare systems. The World Health Organization Collaborating Centre on Health Policy, Governance and Leadership organized the 1st European Academy for Healthcare Leaders in Rome from 15th to 17th November 2018. Senior officials of the Ministries of Health of 16 Members Countries of the WHO European Region attended and actively participated to the event, led by experienced Italian and European experts. The Academy could be considered a moment of high training on leadership and governance of health systems.

Objectives:

The event was aimed at creating effective networks among participants to share ideas and strategies to improve leadership skills, providing practical tools to be applied in healthcare systems and to develop a common and transferrable leadership framework in Europe. Frontal lectures and interactive workshops covered three main areas: leadership skills, current challenges of health systems and sustainability of health systems today.

Results:

The 3-days event gave the opportunity to discuss the main issues in Public Health highlighting how to be an effective leader in healthcare. Leadership should enable the translation of knowledge into productive action pathways, providing health equity and improving population's health. At the end of the event, participants filled a survey and the results showed high satisfaction about contents (100% out of 16 participants).

Conclusions:

Health systems need to change in order to face the formidable challenges of our times. This event empowered the participants in order to support the creation of strategies and to develop leadership tools to apply at country level. The experiences, ideas and good practices shared during this event strengthened a collaborative network and have been useful to identify common goals and solutions.

Key messages:

- These kinds of events are fundamental to improve knowledge about leadership in healthcare.
- Leadership should have a major role to play in healthcare worldwide.

A framework to help defining relevant preventive actions in multi-professional health care centers

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For more than 10 years in France, multi-professional healthcare centers have been considered as innovative organizations, which offer attractive work conditions for health professionals and help to structure primary care. Their development is strongly supported by public policy (e.g. specific funding methods, a target of 2000 teams by 2022) and is seen as a mean to enhance preventive actions.

From a public health perspective, when professionals define their collective project, preventive actions should be chosen according to their relevance (by considering local population needs), effectiveness (based on evidence) and realism (in terms of implementation). Our goal was to make an inventory of existing tools and recommendations but also to propose a framework that considers the actual practicing conditions of French primary care teams. Three methods were used: a bibliographic study, feedback from a consulting firm with a 10 years' experience in supporting new teams in defining their multi-professional project, and interviews from experts and health professionals.

Due to professional training and practice, preventive actions are less familiar to professionals when they are not integrated into individual and curative cares. Indeed, most existing recommendations are designed from a macroscopic point of view, dismissing the particularities of multi-professional private practice. Thus, we could identify 9 categories of factors likely to determine the relevance of a preventive action, including a specific context-population-team setting. Although this is an exploratory work, feedback from professionals confirms the potential positive or negative influence of these items on the implementation of an action.

Our framework could be converted into a tool consisting of a list of questions to ask before primary care teams choose a preventive action to implement. Frequent assessments should be carried out and shared in order to develop empirical and reliable knowledge in this field.

Key messages:

- Despite a strong public policy to develop multi-professional health care centers in France, recommendations about preventive actions insufficiently consider specific conditions of practice.
- Mixing theoretical and practical perspectives, our framework could help to improve the relevance, effectiveness and realism of preventive actions considering a specific context-population-team setting.

Government-based financing strategies for public health in Ukraine: way of transforming

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Since 2016 Ukraine is going through health financing reform. National public health (PH) system functioned with focus only on control of epidemics and sanitary situations. Following EU recommendations, the Government established Center for Public Health (CPH) and adopted the Concept of PH System Development. As new Budget Code comes into force in 2020, PH system must be transformed on institutional and financing level.

We conducted policy analyses and developed PH financing options and found that existing budget programs (epidemiological surveillance and purchases of medicines) make up over 70% of the total government PH spending. Public spending was ineffective based on line budget approach without attention to quality and not linked to epidemiological situation. New PH mechanisms will be piloted in 2019 in several regions to calibrate approach and ensure evidence-based policy. Transformed financing model focuses on purchasing PH services rather than maintenance.

We selected a phased approach to launch new PH financing mechanism. Procurement system ProZorro allows to follow transparency and good governance principles while purchasing PH services. Using experience with GF's procurements, the CPH will purchase services: HIV and hepatitis prevention among key population, supporting PLWHIV, epidemiological surveillance. Legal framework developed and agreed with stakeholders. This approach allows to shift focus from dealing with consequences to prevention and early revealing of potential PH risks. Provider's staff and network will be optimized. Budget economy is up to 15% in 2019, and additional 5% in 2020.

The rebuilding PH system showed that 2019 is an opportunity to develop and pilot new financing approaches. Key step is to ensure that national policy equipped with legislation and recommendations to implement new PH approaches. Pilot results will become a strong base for further PH system development as well as evidence-based policy for effective response to PH needs.

Key messages:

- Public health system in Ukraine is going through reforming process to address existing challenges and introducing new financing approaches with a focus on regional level.
- Using transparent procurement system to transform the public health financing mechanisms due to existing limitations and overall health financing reform in Ukraine.

Perceptions of barriers and levers to health-enhancing physical activity policies in French cities

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Background:

Policy is one of the levers to initiate structural change to foster the promotion of Health-Enhancing Physical Activity (HEPA). To this end, policymakers have to deal with complex ecosystems embedded in specific contexts. However, limited research has been published on this topic at the local level. The purpose of this study was to identify the barriers and levers to develop HEPA policies from the point of view of municipals managers and elected officials in mid-size French cities.

Methods:

This study was conducted following the concept mapping approach: a list of statements was submitted to 17 French mid-size cities. These statements completed the beginning of this sentence: ''In a mid-size municipality context, to develop HEPA policies, it is necessary to...''. First, key informants in each city rated the importance of each statement without considering their local context according to a Likert scale, ranging from 1 (not at all important) to 6 (extremely important). Then, they had to rate the feasibility of each statement considering their local context according to a Likert scale ranging from 1 (not at all feasible) to 6 (extremely feasible).

Results:

A total of 23 municipal managers and 10 elected officials from sport (n = 14), health (n = 10), and social (n = 9) sectors from 11 French mid-size cities participated in this study. Statements related to political commitment, shared governance and partnership appeared as potential levers to develop HEPA policies. Statements related to the economic model of the local HEPA promotion, mandate of the mayor, and land use planning appeared as potential barriers to develop HEPA policies. The results varied according to the position and the sector of the respondent.

Conclusions:

The results suggest that some local contextual factors could affect the development of HEPA policies in mid-size French cities. This study contributes to a better understanding of the development of local HEPA policies in the French context.

Key messages:

- Local contextual factors should be considered when developing health-enhancing physical activity policies.
- The perceptions of these local contextual factors varied according to the position and the sector of the respondent.

Organized colorectal cancer screening: the participation rate according to the precariousness

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Background:

The National Organized Colorectal Cancer Screening Program (DOCCR) was introduced in 2008. The participation rate in France is much lower than the European recommendations (33.5% versus 45%). There are significant disparities across France.

The objective was to assess whether there are disparities in participation rates within the Bouches-du-Rhône(BdR) department and to study the possible correlation of these geographical areas with their level of precariousness.

Methods:

Based on data collected by the ARCADES association (management structure in charge of cancer screening in the BdR region), 325,207 people in 2012 and 489,953 in 2017 were invited to participate in the DOCCR. The participation was analysed in two aspects: participation rate (TP) (test carried out) and participation rate of those who took a test or expressed a justified refusal (TPJ) (personal or family history, other test under 2 years old, colonoscopy under 5 years old). An average precariousness rate was also assessed per municipality based on 2012 INSEE data for the age group concerned.

Results:

The TP were 18.9% in 2012 and 14.4% in 2017; the TPJ were 22.8% and 16.4% respectively and differs significantly between the municipalities in the department ($p < 0.001$). The average precariousness rate observed in our population was 12.3 (±8.2). The TPJ is inversely correlated with the precariousness rate: the higher the latter, the lower the participation rate ($R = -0.58$ in 2012, $R = -0.539$ in 2017; $p < 0.05$). The average participation rate whatever the year is lower for municipalities with a precariousness rate below the median (19.2 ± 2 versus 16.9 ± 3.5 for the year 2017).

Conclusions:

Participation rates in 2012 and 2017 are lower than the European recommendations. The participation is significantly related to the average rate of precariousness; the most vulnerable participate less well. Specific actions towards the most vulnerable are to be considered in order to improve adherence to the DOCCR.

Key messages:

- The participation organized colorectal cancer screening program is significantly related to the average rate of precariousness.
- Specific actions towards the most precarious are to be considered in order to improve adherence to the DOCCR.

Caregivers of non-dependent old person: perceived loneliness is associated with poor health status

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Objectives:

Informal care has poor effects on caregivers' health status. Several studies targeted informal caregivers of dependent or severely ill old persons. But, few of them analysed non-dependent old persons caregivers and their perceived loneliness. We hypothesized that perceived loneliness is an independent factor that worsen the caregiver burden and perceived health status. The aim of this study is to analyze factors associated to the perceived loneliness of caregivers of the non-dependent old persons.

Methods:

A Cross-sectional study has been conducted among 876 dyads. Old persons over 70 years of age, non-dependent, living at home and their caregiver eligible for social support by retirement and occupational health insurance in South-east of France were included. Caregivers were assessed by the Mini-Zarit Scale for the burden, and with 5-point -Likert scales for loneliness and perceived health status. A multivariate logistic regression model was performed to analyze explanatory variables related to loneliness.

Results:

Characteristics of the caregivers were: 64.5% female, 29% spouse, 61% children; 64% with frailty and 38% with high burden, 10.5% of them felt often or always lonely. Loneliness was positively associated to (OR; CI 95%): caregiver's poor health status (3.40; 1.60-7.23), burden (4.06; 1.99-8.27), sleep disorders (3.75; 1.85-7.60), anxiety (6.64; 3.23-13.65) and a bad relationship with the old persons (2.17; 1.11-4.25). Loneliness was negatively associated to a good family support (0.33; 0.17-0.63) and living alone (0.34; 0.16-0.76).

Discussion:

Loneliness should be differentiated from social isolation. Caregivers loneliness is not very frequent but highly correlated to a poor health status perception. Thus, it is essential that health care providers assess for caregivers' perceived loneliness to implement specifics supporting actions to improve health status.

Key messages:

- Caregivers loneliness is not very frequent but highly correlated to a poor health status perception.
- It is essential that health care providers assess for caregivers' perceived loneliness to implement specifics supporting actions to improve health status.

Personalized Care Plan for non dependent old persons decrease significantly caregivers' burden

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Objectives:

Informal care provided by family caregivers in old persons is associated to a high risk of burden and poor health status. This study aimed to analyze the impact of a Personal Care Plan (PCP) attributed to non dependant old persons living in the community on caregiver burden, satisfaction and frailty.

Methods:

This non interventional longitudinal study was performed in the south East area of in France: olds persons asking for a PCP (>70 years old, with no disability and no severe chronic disease, living at home) and their caregiver were included with a 6-months follow up. Dyads were visited at home by social workers. Caregivers Burden has been assessed with Mini-Zarit and frailty status with FiND (Frail Non-Disable).

Results:

876 dyads (old persons: female 77.6%, aged 82.2 ± 5.8 years old; caregivers: 64.5% female, 29% spouse, 61% children; 64% with frailty and 38% with high burden; high burden being significantly associated with frailty) were eligible for a PCP. Among them, 564 PCP were financed, mainly: housekeeping and meal preparation. For those old persons who had PCP, near half of their caregiver decreased the time spent to these activities. With the PAP, 88% of the caregiver had a lower burden level, only 6% had a persistent high burden; 61,5% were totally satisfied. Frailty status was not modified.

Discussion:

Our study highlight that the burden occurs also in non dependent old persons's caregivers. Social support implementation for activity of daily living had a major impact on the burden but not on the caregiver frailty, which means that determinants of caregiver's frailty are more complex and further studies are needed.

Key messages:

- Social support implementation for activity of daily living have a major impact on the burden; the burden occurs also in non dependent old persons's caregivers.
- Personalized plan implemented to support activity of daily living improve caregiver burden even in non-dependent old persons.

Mutual Learning in Cancer Control Policy Implementation: Interviews With Local Policy Makers

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Many policy recommendations in the field of cancer control are developed at the EU level, but insights on the practical implementation are lacking. However, European Member States encounter similar barriers when implementing and could learn from each other. Our aim is to facilitate this, through a mutual learning platform, developed in the framework of the EU Joint Action on Cancer Control, iPAAC.

A first step is to collect examples of implementation experience in the field of prevention, screening, diagnose and treatment, organisation of care and cancer information systems and to identify the key contextual features of the country (legal framework, healthcare systems, etc.). Therefore, in-depth interviews with national policy makers, administrators and experts of 20 EU Member States are carried out. A second step is to translate their experiences into factsheets, which will the core of the mutual learning platform.

Two types of examples of experiences came up: firstly, implementation plans or frameworks and secondly, practical solutions to implementation challenges. These last relate to different barriers encountered: the industry lobbies; stakeholder's involvement; avoid and tackle social inequalities; evaluation of programs; introduction and financing of innovations, digitalization, organization of the health care system, etc. The results also include a series of reported challenges for which further policy support or knowledge is needed.

The results clearly show that similar challenges exist and are solved in different EU countries. Through translating the examples of implementation experience into factsheets, countries can learn from each other. Besides the factsheets, the mutual learning platform will provide contextual features which allow and support translation into the local context.

Key messages:

- By conducting in-depth interviews with health policy makers, common challenges in the implementation of cancer control policy, as well as solutions to overcome them, came up across EU Member States.
- Through the provision of concrete examples on how to overcome implementation barriers, we facilitate mutual learning between the EU Countries to improve cancer control and benefit to public health.

Do modern dental care systems adequately meet the health needs of citizens? Poland comparing to EU

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Background:

residents of highly developed countries do not have universal access to dental care at a level corresponding to the current needs, that results from the ongoing socio-economic, health and demographic changes. Dental care is fragmentary, covers only selected population groups, by far the largest negligence is in the field of prevention. Poland is an example of bad oral health status, where dental caries index for adolescents in all ages groups has been the highest in Europe.

Objective:

The aim of this study was to carry out an analysis of some organizational, financial and social aspects of a dental care in Poland, comparing to EU countries, and to identify the main causes of a bad oral health outcomes.

Material and methods:

This research presents findings from the 610 dental providers interviews, carried out in 2018. The survey consisted of 32 questions, concerning all relevant aspects of dental clinics activity. Statistical analyzes were performed in a SAS package - 9.4 version.

Results:

Poland has the highest number of dentists in EU (9.9 per 100 thou. of population) while the average for EU is 6.6. Dental rooms are modernly equipped. Dentists apply the newest technologies, they are constantly improving their knowledge and implement the TQM tools. Less than 30 % of patients are treated in public system, the average waiting time for the appointment in public sector is three times longer than in private one. Dentists perform the care of young people mainly in the area of conservative dentistry.

Conclusions:

Improving children's oral health should be a public health priority in Poland. Public authorities in a very limited extent participate in the organization, financing, supplying and supervising of dental care. Health promotion programs are ineffective, health needs assessment aren't being done, we observe the lack of cooperation between the key health institutions and lack of tools to identify socio-economic inequalities.

Key messages:

- Research financed by Medical University of Silesia in Katowice.
- The aim of the study was to carry out an analysis of some organizational, financial, social aspects of a dental care in Poland comparing to EU, and to identify the causes of a bad health outcomes.

Healthy public policy competences for public health: interactive and practice-oriented curriculum

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Background:

Developing and implementing healthy public policy (HPP) is one of the practical competences expected of public health professionals in Europe and beyond (ASPHER 2018, Public Health Agency of Canada 2015, US Public Health Foundation 2014). Yet, organizational practices in building public health capacity to promote HPP are seldom documented. In order to improve its HPP interventions, the Montreal Public Health Unit has been leading and evaluating a HPP multidisciplinary community of practice since 2014. In response to participants' requests, we recently formalized a HPP curriculum.

Objectives:

Over a period of 12 months in 2018-2019, our objectives were to: (1) develop and pre-test a competency-based professional development curriculum in HPP for public health staff and interns (2) provide a repository of relevant references (3) identify dynamic pedagogical strategies applicable to a community of practice.

Results:

As community of practice members and facilitators, we developed a HPP curriculum with the support of pedagogical and HPP experts. It was pre-tested and iteratively adjusted with members of the community of practice. We drew content from various disciplines including political sciences, public health, communication studies and public relations. We identified relevant: (1) competences; (2) core concepts; (3)

practical skills; (4) key references; (5) practical case studies, (6) interactive pedagogical strategies such as an open-source online learning system.

Conclusions:

We developed an innovative healthy public policy (HPP) curriculum in order to support an existing community of practice among public health staff. Dynamic pedagogical strategies and a more formal HPP curriculum can support competence development among public health staff, and this can be achieved while relying mostly on in-house expertise. This constitutes a stimulating capacity-building initiative for the enhancement of public health core competences.

Key messages:

- Developing healthy public policy is a core practical competence expected of public health professionals. Yet, organizational practices in building healthy public policy capacity are seldom documented.
- Developing dynamic pedagogical strategies and a more formal healthy public policy curriculum can support competence development among public health staff, while relying mostly on in-house expertise.

Predictors of nursing-home entry for elders in Belgium

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Background:

Due to the aging of the population the demand for long-term care services is expected to rise during the coming years. For a better planning of health care resources policy makers have to be aware of risk factors associated to nursing home entry (NHE). The present study aims to identify predictors of NHE in a representative sample of Belgian community dwelling older residents.

Methods:

Date from the participants of the Belgian health interview survey (BHIS) 2013 aged 65 years and over were individually linked with longitudinal data from the Belgian compulsory health insurance data (BCHI) over a 5-year period (2012-2017). Institutionalized BHIS participants were excluded, resulting in a final database of 1,927 individuals. A multivariate Cox proportional hazards model was fit to estimate the hazard of NHE. The model examined the hazard of NHE over the follow-up period in function of predisposing, enabling and need variables observed at baseline. All analyses were done using SAS 9.3 taking into account the survey design settings.

Results:

Over the follow-up period, 169 out of 1,927 individuals entered in NH (56% males, mean age $=74.7\pm0.25$). Significant predictors of NHE were older age (hazard ratio (HR) $=2.40$, CI = 1.23-4.67 and HR = 6.19, 95% CI = 2.75-13.92, respectively for 75-84 years and 85+ years compared to 65-74 years), living condition (HR = 4.28, 95% CI = 1.01-18.19 for living alone), severity of limitation in ADLs (HR = 2.61, 95% CI = 1.39-4.88 for moderate limitation and HR = 2.40, 95% CI = 1.10-5.26 for severe limitation, compared to those without limitation).

Conclusions:

Apart from age and living condition, the ADLs limitations were the strongest predictors of NHE. Public health action to reduce NHE of older people should first of all focus on preventive action at middle age which will reduce activity limitations at later age.

Key messages:

- Risk profiles for NHE are highly dependent individuals.
- NH should be more specialized with qualified professionals.

Access to emergency care units by socially vulnerable patients: a qualitative research

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Background:

The increasing prevalence of chronic diseases, the decline in medical demography, the ramp up of new information and diagnosis technologies, together with the growing health social inequalities urge decision makers to rethink the access to emergency care units (ECU) and reduce the rate of multiple admissions, especially for people living in vulnerable conditions. Beyond the medical causes of access to ECU, it is crucial to understand the psychosocial representations of patients and health professionals.

Methods:

23 socially vulnerable patients who have already been admitted within the last 3 months and ECU health/social professionals were interviewed face-to-face by a psychosocial scientist using a semi-directed approach, in 3 hospitals. The thematic content of data was analyzed in order to identify salient social representations of access to ECU.

Results:

27 themes emerged to understand the issue of the access to ECU, joining into 5 main categories: perceived needs for access to ECU, perception of precariousness, the relationship of patients and professionals with the healthcare system, the shared experience of aggressiveness in ECU, expectations in post-emergency support. As regards the needs for access to ICU, several issues were identified: exemption from making upfront payments, needs for listening, support, reinsurance, privacy and consideration of emergency professionals, referral by general practitioners (GP), difficult access to GP, needs for immediacy and timely healthcare services, permanent opening of ECU. As regards the experience of ECU professionals: ambivalent emotions towards socially vulnerable patients, a recurrence of passages leading to a reduced medical attention, a feeling of failure to care for vulnerable patients, coping strategies in caring for these patients.

Conclusions:

Our results bring several leads to improve the organization and the management of healthcare in ECU and in primary care for socially vulnerable patients.

Key messages:

- To identify the psychosocial rationales of access to emergency care units provides several leads to build a more efficient healthcare policy and reduce the burden of overloaded services.
- To reduce the overburden of emergency services can only be achieved by a global approach of the access to both emergency and primary care and a better support after emergency discharge.

Convergence in disability policies in the welfare states Denmark, Sweden, the UK and Australia?

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Background:

A state's relation to citizens who are not able to support themselves due to illness is one of the cornerstones of welfare states. However, rising numbers of people on disability benefits is a challenge in many welfare states. The first aim is to investigate how policies around eligibility to disability benefits articulate a concept of 'incapacity to work' across social democratic (Denmark and Sweden) and liberal welfare states (Australia and the UK). Secondly, we wish to explore how the conceptualisation of capacity and incapacity to work shapes prevailing constructions of disability.

Methods:

In this study, we analyse official policy documents from governments, legislation, scientific and grey literature on disability benefit reforms in the selected countries. The analytical framework introduces the notion of decommodification of labour for people with disability and the 'social model of disability' in relation to the constructions of disability in current disability benefit reforms.

Results (preliminary):

Restricting access to disability benefits has been a key feature of the recent reforms across all different types of welfare states. Liberal welfare states are more pervasive in reassessment of previously granted benefits compared to social democratic welfare states. The construction of disability in recent reforms is at odds with the social model of disability.

Conclusions (preliminary)

Across both liberal and social democratic welfare states eligibility for disability benefits is articulated around notions of incapacity to work. Retrenchment of benefits is, overall, most pervasive in liberal welfare states.

Key messages:

- The convergence in social policies across both social democratic and liberal welfare states speaks to the pervasiveness of neo-liberal notions in current social policy.
- The tightening of eligibility criteria for disability benefits poses great financial and health risks to people with illness struggling to support themselves.

Implementation of a new model of management to increase the effectiveness of nursing specialists

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Issue/problem:

Nurses play a key role in the system of public health. The total number of nurses in Kazakhstan is 105,441 people (January 1, 2019), which is over 40% of all health workers in the health system of Kazakhstan. The continuing problem of insufficiently effective nursing service (NS) in the country prompted us to develop policy options to increase the NS effectiveness.

Description of the problem:

Key problems of the NS in Kazakhstan include the ineffective management of NS in health organizations, which is associated with an underestimation of the role of nurses in the therapeutic and diagnostic process. There is also a discrepancy in the functioning of the system of nursing education, research and practice with European directives. There are inadequate regulatory acts governing the activities of nurses (including the lack of national guidelines, nursing standards, etc.).

Results:

As a result of analyzing the current situation in the country and summarizing the data from systematic reviews, we were developed the Policy Brief on the issues of implementation of a new model of the NS management. As the key policy options, we proposed: 1. Improving the NS management in health organizations based on a revision of the role of nursing staff in the treatment and diagnostic process; 2. Improving the sectoral qualifications system of nursing specialists in accordance with European directives; 3. Ensuring the development of evidence-based nursing practices with the implementation of generally accepted international standards and models, the development of national guidelines and standards for NS.

Lessons:

The proposed measures found support from the Ministry of Health and were included in the action plans. Each of these policy options contributes to increasing the effectiveness of NS in the health system of Kazakhstan, but these options provide more substantial achievement of the goal of enhancing the role and status of a nurse with their combined implementation.

Key messages:

- Implementation of a new model of the NS management in which nurses and physicions work on an equal footing and independently can significantly improve the efficiency of NS.
- Implementation of evidence-based approaches to the formation of a policy in the field of the NS development gives possibility to increase the effectiveness of the reforms in this field.

The Portuguese HIV/AIDS Programme under austerity

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Background:

The HIV/AIDS Programme has been a core health programme in Portugal leading the country's response to the HIV epidemics since the 1980s. In 2011, the severe financial and economical context forced the government to reorganize central services, including the Ministry of Health, aiming to improve efficiency and reduce costs. All vertical programmes were reformed, including the HIV/AIDS Programme.

Methods:

For the period 2009-2018, we analyse the outcomes of core HIV prevention programmes managed by the National Programme for HIV/AIDS Infection: the syringe exchange programme, HIV testing, the distribution of preventive materials, and financial support to private non-for-profit organisations.

Results:

This paper describes the main features of that reform and analyses selected outcomes, as well as how those financial constraints affected the response to HIV/AIDS. Despite some transitory cuts in spending, the National Programme for HIV/AIDS Infection was able to successfully expand testing and prevention interventions. Strategic partnerships with non-governmental and community-based organisations were crucial to continue delivering adequate HIV testing services and reaching most-at-risk groups.

Conclusions:

The main goals of the National Programme for HIV/AIDS Infection for the term 2012-2016 were reached, including the decrease of new HIV infections, new AIDS cases and AIDS-related deaths, and the country is in a good position to meet UNAIDS's 90-90-90 targets by 2020. Scaling-up access to pre-exposure prophylaxis, improving access and adherence to antiretroviral therapy, and continuously promoting access to HIV testing services and HIV self-testing stand as the main challenges of the National Programme for HIV/AIDS Infection in the near future.

Key messages:

- Prioritise spending under financial constrains can be cost-effective.
- Besides transitory cuts, HIV programme was able to meet its goals.

Transformative governance for public health: A scoping review

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Background:

As coordination issues arise in an increasingly complex health domain with a growing number of stakeholders involved in health initiatives, WHO proposed a transformation towards a Whole of Society approach. However, this abstract approach lacks practical guidelines to tackle these issues. In domains such as the environmental policy sector, similar transformations were established by applying governance strategies. This study aims to answer, which conditions and arrangements are found in the governance literature for the coordination and evaluation of the transformation of health towards a Whole of Society approach?

Methods:

A systematic search was conducted by combining ’governance’, with adjectives as ’collaborative’, ’adaptive’, ’experimentalist’ and ’reflexive’ in order to target relevant governance theories in JStor, Web of Science, EBSCO and Google Scholar. Based on inclusion criteria two reviewers independently selected articles following PRISMA.

Results:

Analysis of 56 articles showed that transformation should be coordinated by stimulating favourable conditions such as learning and experimenting in networks that cut across traditional boundaries. These conditions and methods can be divided into three categories. First, establish collaborations with government as equal partner by making the inclusion and decision-making process open and transparent. Second, stimulating innovation by engaging local initiatives, and supporting learning, experimentation, reflection and adaptation. Third, ensuring the sustainability of innovation by enabling institutional change.

Conclusions:

To coordinate and evaluate the transformation of health towards a Whole of Society approach, conditions may consist of a combination of collaboration, innovation and institutional change.

Key messages:

- To bring together the fragmented resources for public health, we present emerging conditions for the coordination of a Whole of Society approach as transformative governance strategy.
- The transformative capacity of governance can be found in the combination of the theories as adjectives: collaborative, adaptive, experimentalist and reflexive.

DX Other public health issues

Changes in physical conditions of militars in training: colombian army military school

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When beginning the military life, a series of loads of trainings is faced, in addition to supporting the discomforts of climate, fatigue, the change of feeding, schedule, among other factors. Therefore, the objective of the study was to know the changes in the physical condition of the students who begin their military training with military physical training. The investigation was quantitative, longitudinal type. A total of 18 male first-degree engineering cadets from the José María Córdova Military School of Cadets (ESMIC) in Bogotá were evaluated. They were given a pre and post-test of body composition, flexibility, resistance and strength and the training program of the Military school. The findings show that after six months of training the cadets increased body weight (64.6 vs. 65.2) in 0.55 ($p = 0.002$), with a gain of 0.4 kg fat mass (7.9 vs. 8.2g, $p = 0.006$) and 0.2 kg muscle mass (53.9 vs 54.1g, $p = 0.01$), in relation to physical abilities there was a decrease in strength in upper limbs (49.4 vs 45.2 $p = 0.001$) of 4.3 kg and in lower limbs (46.6 vs 43.7, $p = 0.000$) of 2.9 kg, in terms of aerobic resistance (47.8 vs 48.2)and flexibility (30.8 vs 41.3) there was a slight increase without significant differences. The previous results show possible over-training in the ESMIC cadets; due to the change of habits, specifically physical exercise and lifestyle, leading to an increase in weight, in greater quantity in the fat component and decrease in the physical capacity of strength, which can cause early fatigue, being counterproductive when found in some combat or special situation. This is why a specialized systematic training program is the best option for the optimal development of physical abilities, physical adaptation to the effort and prevention of injuries during the practice.

Key messages:

- Injury prevention; Military Personnel; Physical Education and Training.
- Physical Education and Training; Military Personnel; injury prevention.

Tamoxifen and antidepressant’s co-prescription: general practitioners and pharmacist’s alert

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Issue:

Well known drug-drug interaction with some antidepressants, especially selective serotonin reuptake inhibitors which reduce tamoxifen’s effectiveness and associated with an increased risk of death from breast cancer.

Description of the problem:

To identify and characterize the exposure to antidepressants in women with breast cancer treated with tamofixen in a west french area. Retrospective population based cohort study; claims from the French Health insurance database. Women living in Pays de la Loire area, aged 20 years or older treated with tamoxifen for breast cancer in 2018 who had concomitant treatment with antidepressants. Call phone to general practitioner’s and meeting with pharmacist when a high or moderate level drug-drug interaction’s was identified.

Results:

Of 4138 women treated with tamoxifen, 497 (12%) received an antidepressant treatment in 2018, corresponding to 571 co-prescriptions. Of them, 74 (13%) was moderate level drug-drug interaction, 66 (11.6%) high level and 307 (53.8%) weak level.70% of high level drug-drug interaction were due to paroxetine and 43% of moderate level due to duloxetine. For these co-prescriptions, concomitant patient’s exposure was for more than four months in 22% cases. 127 different general practitioners and 152 pharmacists (339 different dispensation's date) were concerned by these drug-drug interactions.

Lessons:

French health insurance medical department has contacted general practitioners or pharmacists concerned by these drug-drug interactions. We informed general practitioners to be aware about women treated with tamoxifen when co-prescription with an antidepressant is necessary, preference should be given to one of them that show little or no inhibition of cytochrome P450 2D6.

Key messages:

- Mediation medication and detection of drug-drug interaction by pharmacist.
- Preferential choice of antidepressant by general practitioner or women treat with co-prescription (tamoxifen and antidepressant).

Knowledge, Attitudes and Beliefs towards Electronic Cigarettes among University Students in Austria

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Background:

The popularity of e-cigarette is increasing recently, both as an alternative nicotine delivery tool or smoking cessation aid. Austria is a country with a high smoking prevalence; 28% of the population are current smoker and 21% have tried e-cigarettes at least once. In this current context, it is important to understand the opinion regarding e-cigarettes.

Methods:

This cross-sectional survey examined the use, knowledge, attitudes and beliefs towards e-cigarettes among undergraduate students from Carinthia University of Applied Sciences in Austria. The anonymous questionnaire was handed out in 29 classrooms during compulsory lecturers, and completed questionnaire was returned to a provided box in the front of the classroom. Descriptive summary statistics was used to summarize the results using SPSS 24. Statistical significance was considered at $p < 0.05$.

Results:

A total of 528 students were approached and all returned the questionnaire giving a 100% completion rate. 83.7% were female and half (50.2%) were in the age group 20 and 24. 96.6% of students reported being aware of e-cigarettes and 32.4% mentioned trying e-cigarettes at least once. 71.2% reported of ever smoking tobacco. 53.8% disagreed that e-cigarettes are an effective way for smoking cessation and only 10.3% agreed recommending it to a friend or family for smoking cessation. 78.1% believed that e-cigarettes are harmful to the health of those who use them and 58.2% disagreed that the use of e-cigarettes should be prohibited on University Campus premises.

Conclusions:

To our knowledge, this study is the first of its kind performed in Austria. Our study shows that self-reported ever use of e-cigarettes is 1.5 times higher among this population than among the general population in Austria. Majority of participants disagreed that e-cigarettes are an effective way for smoking cessation. There seems a gap in knowledge regarding the e-cigarette which needs to be addressed among the university students.

Key messages:

- In Austria, e-cigarettes use is 1.5 times higher among university students compared to the general population.
- Knowledge gap regarding e-cigarettes needs to be addressed among the university students.

Spatial characterization of the targeting's worst-off au Burkina Faso

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Introduction:

In 2014, the Government of Burkina Faso received technical and financial support from the World Bank to test the PBF project with various equity measures. Health equity measures included community based selection of worst-off and user fee exemption for them at the point of service. This selection was carried out in 8 health districts. More than 110,000 worst-off have been selected. Several analyses show that their use of care remains low. Our study aims to characterize the selection of the indigent by considering geographical determinants in order to better understand the weakness of access to care.

Methods:

We have mapped the selection of the indigent based on the geolocation data collected with a GIS. We carried out spatial analyses to measure access to localities, health center and the main access roads. We have also integrated population data and geo-environmental characteristics. All these data were aggregated in 500 m cells to provide all variables on a single scale. A total of 9 variables were generated to characterize the spatial targeting's worst-of. We combined two cluster analyses, i.e., k-means, and hierarchical clustering.

Results:

We obtain a characterization of the selection into four classes. These classes highlight that the community-based selection of the worst-off is unequal in terms of distances to localities, health centres, and isolation. The results refine our knowledge of geographical accessibility to health centres by illustrating that distances to the health care centre are not the only geographical determinants to be considered.

Conclusions:

This study is a contribution to the analysis of the characterization of the targeting of the worst-off. The results suggest that it is important to strengthen support for the most isolated worst-off for an access care. More broadly, this study shows that it is necessary to integrate the geographical dimension into the definition of targeting the worst-off.

Key messages:

- It is necessary to integrate the geographical dimension into the definition of targeting the worst-off.
- It is important to strengthen support for the most isolated worst-off for an access care.

Recognition and Participation of Colorectal Cancer Screening in Turkey: Meta-analysis of Literature

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Background:

The aim of the study was to perform a systematic review and meta-analysis of studies about the proportion of recognition of fecal occult blood test (FOBT) and colonoscopy (CS) methods and participation to them in any period of life for colorectal cancer (CRC) screening in Turkey.

Methods:

PubMed, Web of Science, Google Scholar, Turkey Citation Index and YOK Thesis Center databases were screened both in Turkish and English language to identify relevant studies and key words 'colorectal cancer', 'colon cancer', 'cancer screening', 'information', 'attitude', 'behavior', 'awareness' and 'Turkey' were. Criteria for inclusion in the analysis were; conducted in Turkey, original and cross-sectional, conducted CRC risky groups (having CRC in the first degree patients and

50 and above age), studies that give the number of participants and number of taking FOBT and CS screening in any period of their lives and/or the number of knowing them. The studies that met the criteria were read as double blind. The data were entered into the Open Meta Analyst demo program. Because of $p < 0.001$ in the heterogeneity test, random effects model was used in group analysis of the articles. The proportion and 95% confidence interval of knowing and taking FOBT and CS were calculated from the total number of cases.

Results:

A total of 1176 articles were reached in first review. Duplications and inappropriated studies were eliminated, and 52 studies were selected. Eight studies about recognition FOBT, 16 about participation FOBT, 9 about recognition CS and 17 about participation CS were taken in analysis. After analysis it was found that 1315 of 4334 individuals (19.3%, 95%CI:6.6-32.1) recognized to FOBT, 1174 of 6825 individuals (13.2%, 8.0-18.5) participated to FOBT, 2197 of 5728 individuals (31.7%, 18.2-45.2) recognized to CS and 913 of 8860 individuals (10.0%, 8.1-12.0) participated to CS.

Conclusions:

The proportion of recognition and participation to FOBT and CS were found less than expected.

Key messages:

- The proportion of recognition and participation CRC screening methods is low in risky groups.
- Awareness and participation of screening should be increased in risky groups.

The relationship between causes of procrastination and sociodemographic factors

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Background:

In recent decades there has been keen research interest in the concept of procrastination and its impact on the student population with few studies being conducted in the Greek student population. The present study aimed to contribute to our knowledge regarding the causes that bring about academic procrastination and to further explore participants' characteristics regarding these causes.

Methods:

A cross-sectional study conducted in Greece with 628 college students at the University of Ioannina. Specially designed instruments were used to record students' sociodemographic characteristics and causes of procrastination (CP). Factor Analysis (FA) with principal components (PCA) was used to derive the main students' causes of procrastination, though Analysis of Covariance was used to examine the effect of their characteristics on these causes.

Results:

5 main causes of procrastination were identified explaining 48% of the total variation. Students' lack of duty/ low tolerance for frustration was significantly associated with their gender ($p = 0.005$), year of study ($p = 0.048$) and grades ($p = 0.008$), while their dependency/difficulty of claim was significantly affected by students' gender ($p = 0.042$), way of living ($p = 0.034$), place of residence ($p = 0.001$) and their age ($p = 0.006$). Moreover, their place of residence was significantly associated with their

fear of failure ($p = 0.001$) and their difficulties in time management and decision making ($p = 0.049$), with those not living in the place of origin presenting greater values in relation to the aforementioned factors.

Conclusions:

Procrastination is a widespread phenomenon in academic settings that affects differently each gender and is also affected by the sociodemographic factors. This study demonstrates the importance of investigating the causes of procrastination as a concept that helps us understand students' behaviour and patterns associated with it.

Key messages:

- There is a great need for further studies on the causes of procrastination in order to help Universities to design learning environments that will be helpful for their students.
- The college instructors should train students not to procrastinate via preventing interventions.

Ageing and its challenges: Communitary Intervention Group findings and experience in 2017, Porto(PT)

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West Porto Public Health(PH) Unit manages a multidisciplinary intervention group - Communitary Intervention Group(GIC) - that responds to critical life situations. It mainly covers mental and public health problems, often associated with ageing. We aimed to characterise the population of referred cases to GIC in 2017, know their geographical distribution and compare case ratio between parish. Data was provided by GIC and all cases from 2017 were included. We used GPS coordinates and QGIS to map the distribution of cases. Case number was compared between parish through the calculation of ratios (considering population size). 95% Confidence intervals (CI) were calculated by Byar's method to assess differences between parish.

A total of 88 cases were referred to GIC in 2017, mostly by the Police (37,1%). Mean age was 62,3 years(16-94) and 62,9% had > = 60 years. Majority (53,3%) were women. The main problem identified was unsanitary housing(23,6%) and elderly at risk(23,6%), followed by psychiatric alterations(15,7%). Considering elderly at risk, 38,1% was associated with unsanitary housing and 14,3% with psychiatric alterations. Parish ''Cedofeita, Santo Ildefonso, Sé, Miragaia, São Nicolau e Vitória''(CSSMS) had the highest number of cases (33,7%) and ''Lordelo do Ouro e Massarelos'' the highest case ratio (21,96; 95%CI:13,92-32,95). Visually most cases live in parish CSSMS or near social neighborhoods. Case ratios was not statistically different between parish.

The type of referred cases suggests a lack of support to elderly. Immediate attention from health services is needed since this situation leads to a misuse of healthcare services, without a sustained benefit, peaking with health deterioration. More investigation is needed, especially to clearly identify social and health determinants. This is particularly important considering the population ageing and the socioeconomic pressure it perpetuates in future generations, compromising their health.

Key messages:

- Health services must rethink elderly care.
- Promoting quality of life through aging is key to sustainability.

Smoking habits among 5th and 6th degree medical students

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Smoking is the most common cause of preventable mortality and morbidity worldwide. In the fight against tobacco physicians take active role. The objective of this study is to determine the rate and patterns of tobacco use among students of Marmara University School of Medicine (MUSM). This is a cross sectional study carried out in MUSM. The study population were all students studying in the 5th and 6th grades. Data were collected through questionnaires. The questionnaire form included sociodemographics, tobacco usepatterns, quitting attitudes and experiences. Among 410 students, 328 participated. Among all 56.1% were 5th year and 43.9% were 6th year students. The median age was 24 and 55.8% were female. 22.6% of the participants were current smoker. 33.8% of males and 13.7% of females are smoking (p:0,001). Common reasons for starting to smoke were the influence of close friends (11.3%), curosity (8.2%), stress (4.6%). Of the participants, 8.5% had smoked waterpipe. 28.4% of the current smokers still smoke waterpipe, 46.2% had tried to quit more than once and 13.5% wished to quit but had never tried to quit. 40.2% of the participants whose close friend smokes and %44.4 whose partner smokes are current smokers (p:0.001). %70 of current smokers tried at least one time electronic cigarette (p:0.001).

Approximately one fourt of the students are current smokers, higher in men. Those who smoked cigarettes had high affinity for waterpipe, electronic cigarettes. Electronic cigarette is fast rising trend daily. Starting smoking and quitting is influenced by close friends and partners.

Key messages:

- The primary goal should be to stop the smokers and prevent the start of the smokers.
- Information should be made on the harms of electronic cigarettes and the community should be informed.