EUPHA HEALTH WORKFORCE RESEARCH

Public Health
Babeș-Bolyai University

How to make a future health workforce happen?
Policy, practice and people

Virtual mid-term Conference
EUPHA Health Workforce Research Section

Book of abstracts

Cluj-Napoca, Romania. 18-19 June 2020

Here is to you, with deep thanks!
To those who are tireless fighting the SARS-CoV-2 pandemic at the frontlines of healthcare systems in Europe and across the globe, putting their own health and safety at risk, and to the many healthcare workers who have lost their lives during the pandemic.

Organisation

Marius Ungureanu, MD, PhD
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www.hwrconference.publichealth.ro

EUPHA HWR section
Ellen Kuhlmann, PhD, MPH

Programme at a glance
time zone is CET for all meetings

Thursday, 18 June 2020

9.00 Welcome and introduction, Marius Ungureanu, Ellen Kuhlmann **livestream**

9.15-10.15 **COVID-19 – what to learn for a future health workforce?** **livestream** Chair and introduction: Matthias Wismar, European Observatory on Health Policies and Systems
Participants
- Natasha Azzopardi-Muscat, WHO Europe Director Country Health Policies & Systems, and EUPHA past President
- James Buchan, WHO Regional Office for Europe, Program Human Resources for Health (with Gabrielle Jacob, Cris Scotter)
- Paolo Michelutti, AGENAS – National Agency of the Regional Health Services, Italy
- Ala Nemerenco, Former Minister of Health in the Republic of Moldova
- Diana Păun, Presidential Advisor on Health to Romania's President

Research sessions, presentations are available on the website

13.00-13.45 **Meet the Network online**, exchanging knowledge, ideas and expertise **livestream**

14.00-15.00 **How to plan the future health workforce? Results from the SEPEN tender**
Webinar Chairs: Michel van Hoegaerden, Ronald Batenburg
- Re-assessing the level of health workforce planning in Europe: new ways forward and new insights? Ronald Batenburg, NIVEL, M Kroezen, M van Hoegaerden, W Sermeus
- Key challenges in health workforce planning in Europe, Eszter Kovács, Hungary, SEPEN tender Coordinator, L Langner, P Szegner, M Szocska, Hungary; M Van Hoegaerden, B Snyers, W Sermeus, Belgium
- The importance of mobility data in health workforce planning, Livia Langner, Hungary, E Kovács, P Szegner, M Szocska, M van Hoegaerden, B Snyers, W Sermeus, Belgium

Research sessions, presentations available on the website

Programme at a glance
time zone is CET for all meetings

Friday, 19 June 2020

9.00-10.00 **How to educate the health workforce and improve leadership? Webinar** Chair: Ellen Kuhlmann

- Professionalisation of the public health workforce in the European region, Kasia Czabanowska, Netherlands, ASPHER Vice President/ Past President
- Human Resources for Health leadership and management program: answering to the training needs of the health workforce, Cátia Sá Guerreiro, Portugal, A Aguiar, W Amde, G Cometto, Z Cserháti, M Dal Poz, P Ferrinho, E Kovács, U Lehmann
- Development of a European Centre of Excellence (CoE) for Research in Continuing Professional Development, Catherine Fitzgerald, T Kearns, Royal College of Surgeons, Ireland
- Learning from COVID-19, strengthening global health in medical education: the perspective of students, Annika Kreitlow, S Steffens, E Kuhlmann, Medical School Hannover, Germany

Comments: Șoimița Suciu, Dean of the Cluj-Napoca Medical School, Romania; Todorka Kostadinova, Vice President of the University of Varna, Bulgaria; Monica Brînzac, EUPHAnxt Representative

Research sessions, presentations available on the website

12.00-13.00 **How to manage transnational mobility of the future health workforce? Webinar** Chair: Marius Ungureanu

- Health professional mobility and the Global Code of Practice: evidence from joint EUROSTAT/OECD/WHO survey data, Gemma Williams, European Observatory on Health Systems and Policies, UK, G Jacob, C Scotter, I Rakovac, WHO Europe, M Wismar, European Observatory on Health Systems and Policies, Belgium
- The mobile nursing workforce from Portugal to the NHS in England: different expectations of systems, organisations and the individual professional, Claudia Leone, Nuffield Trust, UK, AM Rafferty, JE Anderson, G Dussault, Portugal
- A human side of migration: Serbian doctors and nurses, Milena Santric-Milicevic, M Vasić, Serbia
- Transnational workforce mobility in long-term care in Europe: a framework for cross-country comparative analysis, Ellen Kuhlmann, Germany, V Burau, Denmark, M Falkenbach, USA, Kasia Klasa, USA, E Pavolini, Italy
- The mobility transition in health professional emigration, Joseph Nwadiuko, K Roa, L Paina, USA

13.00-13.30 **Summing up and future projects, livestream**
Organisers and collaborating partners

Abstracts livestream and research sessions

Thursday, 18 June 2020

COVID-19 – what to learn for a future health workforce?
livestream

Policy dialogue participants

Matthias Wismar (Chair)	Senior Policy Analyst, European Observatory on Health Systems and Policies
Natasha Azzopardi-Muscat	WHO Europe Director Country Health Policies & Systems, and EUPHA past President
James Buchan	WHO Regional Office for Europe, Program Human Resources for Health (with Gabrielle Jacob and Cris Scotter)
Paolo Michelutti	AGENAS – National Agency of the Regional Health Services, Italy
Ala Nemerenco	Former Minister of Health in the Republic of Moldova
Diana Păun	Presidential Advisor on Health to Romania's President

Research sessions – presentations available online

POLICY

Research session 1. Health workforce policy and practice

Human resources for health during and after the reform of the primary health care in Montenegro
Lidija Scepanovic (Montenegro), M Santric Milicevic (Serbia)

How can family doctors in Romania contribute to health system objectives? An analysis of the gaps between professional scope of practice and legal scope of practice
Marius Ungureanu, E Costiug, MG Brînzac, A Papiu, A Forray (Romania)

Why should we care about the loyalty of nurses? Insights from Moscow surveys
Ignat Bogdan, MV Gurylina, DP Chistyakova (Russia)

Health workforce governance through the lens of the profession: a re-analysis of New Zealand's Primary Care workforce policy actors
Gareth Rees (Peru)

Is integration of combatant health workers in the public health arm possible? Lessons from Nepal
Bhimsen Devkota (Nepal), E van Teijlingen (UK)

Between public policy responses and reality: an analysis of the human resources for health in Romania
Monica G Brînzac, M Ungureanu (Romania)

PRACTICE

Research session 2: Health workforce capacity and practice

Trainees who started and completed HCA training in Portugal between 2011 and 2018: how many, who and where are they?
André Beja, I Craveiro, T Correia, P Ferrinho (Portugal)

Comparative analysis of the health workforce in Post-Soviet countries
Milena Santric-Milicevic, NB Boskovic, SM Milicevic (Serbia)

How can legal definitions support skill mix adaptation in France
Louise Luan, Y Bourgueil (France)

The trends of physicians in the public health sector in Montenegro
Marija Palibrk, M Palibrk, N Terzic (Montenegro)

Evidence on health workforce effectiveness of hospitals in Sub Saharan Africa
Philipos Gil (Ethiopia), M Buljac-Samardzic, JJ Van De Klundert (Netherlands)

Distribution of workforce in dentistry in Cluj region
Ondine Lucaciu, R. Bordea, NB Petrescu, I-C Mirica, O Aghiorghiesei, A Mester, M Aluas, RS Campian (Romania)

Research sessions – presentations available online

PRACTICE

Research session 3

Increase of salaries as strategy for preventing migration of young doctors: Romanian experience
Florentina Furtunescu, M Georgescu, DG Minca, BC Pana, A Dragoescu (Romania)

Social Responsibility skills of future managers in in health care organizations: focus on the EHESP-French School of Public Health
Estelle Baurè, C Harpet, A Lefébure (France)

Advocacy for the specialised health workforce: the case of rheumatology physicians in Germany
Ellen Kuhlmann, D Ernst, A Jablonka (Germany)

Building public health workforce capacity in the medical field from Tunisia
Madalina A Coman, O Oltean, RM Chereches, E Bozdog (Romania)

Universal health coverage and health worker maldistribution in the European Union: solidarity versus subsidiarity
Corinne Hinlopen (Netherlands)

Breaking the silos: a roadmap to address the equality, diversity and inclusion challenges in the ever-changing healthcare landscape
Valia Kalaitzi (Netherlands/ Greece)

The SOHE Bridge Project – streamlining bridging studies for obtaining professional rights
Aino Ezeonodo, K Matinheikki-Kokko (Finland)

PEOPLE

Research session 4: Taking care of the health workforce, improving work conditions

A large observational study of burnout and quality of patient care in English General Practices
Maria Panogioti C Grigoroglou, A Hodkinson, S Zghebi, D Ashcroft, E Kontopantelis, C Chrew-Graham, SD Lusignan, A Esmail (United Kingdom),

Stretched, strained and unsustainable: the impact of working conditions on the retention of hospital doctors in Ireland
John-Paul Byrne, E Conway, A McDermott, J Creese, N Humphries (Ireland)

Workforce factors affecting the emergence of Primary Care Units in Austria
Eva Krczal, A Franczukowska, A Braun (Austria)

Health workforce and primary task: practice and people
Marija Jevtic (Serbia/ Belgium)

Using online messenger for teaching health promotion and mentoring skills
Rabiga Khozhamkul, Kosherbaeva, LK, Sharipov, S, Nauruzaliyeva, BA (Kazakhstan)

Brain drain of graduate students of medicine at the Faculty of Medicine University of Belgrade
Biljana Buljugic (Serbia)

Human resources for health during and after the reform of the primary health care in Montenegro

Lidija Scepanovic (Montenegro), M Santric Milicevic (Serbia)

During 2004-2012, the primary healthcare reform activities in Montenegro aimed at supporting the financial sustainability of the health system, among else, by preventing uncontrolled staffing in the public sector. The purpose of this study was to describe the health workforce before, during and after the reform activities in Montenegro.

Methods: The study examined the availability, accessibility, acceptability and quality of the health personnel in primary healthcare in Montenegro, using the Global Health Workforce Alliance / World Health Organization four-dimensional framework of HRH in the context of governance for Universal Health Coverage.

Results: During the reform, the total number of physicians employed in primary health care decreased by almost 25% of their number in 2004. The reform activities also focused on upgrading their professional competencies; approximately 100% of health personnel was successfully trained. The average municipal availability of chosen doctors (e.g., general practitioners, gynaecologists) per 10,000 had a constant but slight increase, reaching 54.0 in 2015 vs. 53.2 in 2004, while their accessibility, e.g., the number of patients' visits per chosen doctors increased by 18% for general practitioners and by 11% for gynaecologists over the reform period.

Conclusions: Governance structures were greatly strengthened by the work of the body that monitored the implementation of reform activities, which ceased to operate after the completion of the reform project. It is recommended to establish a permanent body to continuously monitor the functioning and changes that they occur at the primary level of health care.

The reform has yielded results in terms of availability of chosen doctors whose density increased, as well as their knowledge and skills.

Strengthening the governance of primary health care contributes to accessibility and quality of health personnel providing Universal Health Coverage.

How can family doctors in Romania contribute to health system objectives? An analysis of the gaps between professional scope of practice and legal scope of practice

Marius Ungureanu, E Costiug, MG Brînzac, A Papiu, A Forray (Romania)

The primary care workforce is essential in helping national health systems achieve effectiveness, improve timely access for population, and integrate with public health services, thus having a significant contribution to achieving SDGs and UHC. In particular, existing global evidence shows that improvement is necessary in aligning the training of primary care professionals and the tasks and services they need to provide in order to advance health system goals. The aim of this study is to assess the extent to which the professional and legal scopes of practice for family physicians in Romania are aligned.

Methods: We have used the World Health Organization's health labour market framework as a reference to analyze data on family doctors' scope of practice as identified in the curriculum for family medicine residents' training and the National Health Insurance House framework contract and its norms of implementation.

Results: The family medicine residents' curriculum of training lays out the knowledge and skills family doctors should possess and practice (professional scope of practice). The curriculum outlines family doctors to provide management of acute and chronic conditions, prescribe medication, provide patient triage, but also ensure patient care coordination and protect community health. However, the Framework Contract –based on which the National Health Insurance House is purchasing health services (legal scope of practice) – is imposing severe limitations on family doctors' professional scope of practice. The most significant ones are observed in relation to prescribing rights, care coordination and reimbursement of preventive services.

Conclusions: The identified gaps between family doctors' professional and legal scopes of practice should be addressed by better alignment between the training efforts and the needs of the health system. The policies needed in this regards should focus on production, skill mix composition and performance.

The family medicine workforce in Romania is under-utilized, due to significant difference between professional and legal scopes of practice.

Comprehensive policies need to be designed to improve family physician motivation.

Why should we care about the loyalty of nurses? Insights from Moscow surveys

Ignat Bogdan, MV Gurylina, DP Chistyakova (Research Institute for Healthcare Organization and Medical Management of Moscow Healthcare Department, Russia)

Nurses are the largest health professionals group. There is strong scientific evidence that nurse staffing and quality of their work highly affect treatment outcomes. Despite this nurses are mainly suffering from a bad image of profession and poor working conditions. This study impacts the evidence of the profession's importance, and offers some insights on possible solutions to the existing challenges.

Methods: Authors conducted surveys in 2017-2019 in 9 Moscow public medical organizations (n=3053). In-depth analysis of relations between loyalty level and statistics division-wise took place in one clinic (n=1241, rr=70%). All groups of medical staff took part in surveys, including nurses. eNPS methodology (Reicheld F., Markey, 2013) was used.

Results: Nurses appeared to be the least loyal group of the medical staff, but their eNPS scores showed the strongest correlations with statistical indicators of the clinic. The strongest correlation was found between eNPS and standardized hospital mortality rate (r=-0,7). The main factor of loyalty found was the psychological climate in the ward (up to r=0,82). The experiment allowed to find reference values for this indicators – in all the wards that had rate of nurses mentioning good climate below 28,5% had the mortality rate above the average for Moscow and with rate of more than 55% - less than average (for similar wards). The common main negative loyalty factor was the satisfaction with the salary (r=-0,66).

Conclusions: To improve healthcare system performance we should increase the loyalty of nurses (through improving psychological climate and financial motivation), e.g. by enhancing respect given to them in the team (doctors should be taught this in university) and giving the nurses a chance to earn more if they want to by providing the opportunity for the experienced nurses to perform more complex duties (e.g. some of 'classical' doctor's functions).

Nurse loyalty is important. There is evidence that their loyalty level is connected to the hospital mortality rates.

To improve medical staff loyalty, we should work with psychologic climate in the clinic ward-wise.

Health workforce governance through the lens of the profession: a re-analysis of New Zealand's Primary Care workforce policy actors

Gareth Rees (Peru)

Professions may exert influence over health policy and governance by responding to that which legitimises or challenges their status or power. As less bounded and more collaborative models of care are proposed, an understanding of the power dynamics and positions of professions on workforce issues is beneficial to develop workforce governance settings.

Methods: Through an actor-based framework of four actors, the 'Practicing professional', the 'University-based professional', the 'Organised user', and the 'State', an analysis of these actors' interactions was undertaken. The actors were formed into two configurations, (1) the framework's four-actor configuration and (2) a five actor configuration, through separating 'Practicing professional' into 'Medical' and 'Nurse' for comparison. By reclassifying previously gathered health workforce data, each configuration's actor power, inter-relationship and issue position results were produced using actor analysis software.

Results: In the first configuration the 'Organised user actor' is most influential, while the others are dependent. However, in the second configuration 'Medical and Nurse' are more influential than their position in the first, and the influence of the University-based professional also rises. In both, the State has little influence. Actor inter-relationships find converging positions over workforce issues in both configurations for 'Practicing professionals' and 'Organised users', though 'Nurse' becomes somewhat weaker than 'Medical' in the second. In the first, the State and 'Organised users' have the strongest divergences between actors over issues, with 'Nurse' and 'Organised users' diverging most in the second.

Conclusion: These positions reflect the actors' relative acceptance of policy, as workforce issues with unanimous support suggest easier implementation. However, where there are actor divisions over issues such as the workforce's mix of professionals and solutions to shortages, deeper consideration from policymakers is required.

Understanding actor workforce issue or policy preferences allows for more detailed and considered workforce policy analysis and formation.

Different professions may have divergent views on workforce policy or governance settings.

Is integration of combatant health workers in the public health arm possible? Lessons from Nepal

Bhimsen Devkota (Nepal), E van Teijlingen (UK)

During Nepal's decade long conflict (1996-2006) the Communist Party of Nepal (Maoist) established combatant health workers within its bastion areas. This study examined the number of Maoist combatant health workers, their motives and assessed perspectives of the key actors for their assessment and integration within the public health system. The study used self-administered questionnaires (n=197), semi-structured interviews (n=32) and key informant interviews (n=20).

The Maoist health workforce comprised 1,200-1,500 health workers, 5-8% of the total combatants. After the peace negotiation, most of these health workers lived in remote areas and provisional camps, and some of them worked in, or managed the operation of primary health centres. They were diverse in terms of caste/ethnicity, age, education level, training and experience. Drawn from various backgrounds, many appeared to be young paramedics with few skills and limited training. The Maoist health workers regarded themselves as capable of delivering health services in rural communities. Their sex (odds ratio [OR]= 2.568) and professional training type [OR]=0.247 for each point higher) were significantly related to their motivation for integration.

The governments, including the Maoist led, however did not explore their number, qualities, career motivation and integration incentives. Their limited skills and partisan interests could be an obstacle for their recognition and absorption. The military and political agenda prevailed over the issue of optimal absorption of the Maoist health workers.

Despite having some institutional provisions for health worker skills assessment and accreditation, there was no national discussion of what kind of rehabilitation and integration model could be appropriate for them. This study suggests that the post-conflict settlement of the unofficial combatant health workforce could provide an opportunity to ensure sustainable peace.

During armed conflicts, the rebels develop health workforce for their treatment but they seek integration

Integration of combatant health workers provide an avenue for sustainable peace

Between public policy responses and reality: an analysis of the human resources for health in Romania

Monica Brînzac (Romania), M Ungureanu

Health systems can only function with health workers in order to contribute to universal health coverage and help people enjoy the highest attainable standard of health. The demand for health and care services is growing, so that the human resources play a central role in the well-functioning of health systems. Currently, Romania is facing significant health workforce challenges, related to not only maldistribution of health personnel, but also to poor working conditions. As a result, more and more people lack timely and high-quality healthcare services. Recent wage increases have not yet been assessed accurately to know their impact. The aim of this study is to analyze the healthcare workforce in Romania by making use of the health labour market framework.

Methods: We have used secondary data in the annual report on the Activity of Healthcare Facilities for the period between 2009 and 2018, which we triangulated with data in policy documents and other relevant reports.

Results: Compared to 2009, the overall number of physicians has increased, accompanied by a tendency toward an increasingly ageing workforce. In 2018 there is a twofold increase in the number of physicians aged 65 and above than at the level of 2009 (from 1,386 doctors to 3,229 doctors). Conversely, the share of doctors aged 25 to 34 has increased by a third (from 14,428 doctors in 2009 to 18,638 in 2018). In terms of distribution, the number of physicians varies between development regions, from 4,725 in the Sud-Muntenia region, to 13,973 in the București-Ilfov region in 2018. The ratio of inhabitants reported to one physician has decreased – from 334 inhabitants to one physician in 2017 to 322 inhabitants to one physician in 2018.

Conclusions: In spite of the slight increase in the number of physicians, the human resources are poorly distributed and aging. Better policies are needed and more efforts needs to be put in order to improve the functioning of the healthcare system.

The Romanian healthcare system needs educational policies linked with health labor market policies.

Universal health coverage can only be reached if enough resources are being allocated to human resources planning and stewardship

How to plan the future health workforce? Results from the SEPEN tender. Webinar

Chairs: Michel van Hoegaerden, Ronald Batenburg

Re-assessing the level of health workforce planning in Europe: new ways forward and new insights?

Ronald Batenburg, NIVEL (Netherlands), M Kroezen (Netherlands), M van Hoegaerden (Belgium), W Sermeus (Belgium)

In a Health Policy paper by Batenburg in 2015, the level of health workforce planning in all 28 EU Member States was investigated using country data published by Matrix in 2012. It can be expected that after the Joint Action on Health Workforce Planning and Forecasting (2013-2016) and other initiatives on the country and EU level, Member States have progressed in their level of health workforce planning – while possibly country differences have decreased.

Methods: The same measurements of the determinants and dimensions of health workforce planning used in the HP 2015 paper are applied on new country data, collected in the context of the current SEPEN project. Similar statistical analyses were executed to (1) describe the change in the level of health workforce planning between 2012 and 2019, and (2) re-test the hypotheses on the determinants of health workforce planning maturity.

Results: Member States indeed have made advancement in their level of health workforce planning, but most of the cross-national differences remained. Determinants for the level of health workforce planning also appear to be related with its change over time – taking 'ceiling', 'the handicap of a head start' effects phenomenon, as well as country-specific developments as other explanations for the country differences into account.

Conclusions: The country clusters based on the distinctive determinants of health workforce planning re-appear (as in 2015) the justification of creating groups of Member States that have common contexts to optimize their mutual learning. In this way, EU-level can foster the exchange of Member States, by strategically taking country characteristics (i.e. context differences and similarities) into account. After all, the availability of human resources through health workforce planning remains the common goal for the sustainability of all health systems in Europe.

Levels of health workforce planning in Europe have increased, but in different paces, depending on its different dimensions.

Cross-national variation in health workforce planning remains significant and needs therefore to be taken into account in EU-policies and cluster learning.

Latest challenges in health workforce planning in Europe

Eszter Kovács, Hungary, SEPEN tender Coordinator, L Langner (Hungary), P Szegner (Hungary), M Szocska (Hungary), M Van Hoegaerden (Belgium), B Snyers (Belgium), W Sermeus (Belgium)

Strategies addressing the adequacy of the supply and distribution of the health workforce according to policy objectives and the consequential demand is rather challenging in the EU. HWF planning shows a high variety from partially systematic to more advanced levels of comprehensive systems. The aims of the present paper are to reveal the most crucial challenging issues EU countries face during planning and to address newly emerging challenges. The SEPEN tender (funded by the Consumers, Health, Agriculture and Food Executive Agency 2016 73 01) building on the results of the Joint Action on European HWF Planning and Forecasting conducted activities to map recent developments in HWF planning and policies. This paper summarizes information from the last 5 years. Findings showed several obstacles for systematic planning, which are difficult to solve due to diverse level of interest in countries depending on priorities of the national health policy agenda. Setting training quota for medical students and residency is a frequent planning mechanism in several countries (e.g. Bulgaria, Estonia, Hungary, Portugal, and Romania). Some also have projection models with supply-based approach (e.g. Austria), and some already consider the demand-side with complex methods (e.g. the Netherlands). According to our findings, apparently a growing number of countries are engaging in systematic planning processes, more specifically by optimizing the involvement of a broad range of national stakeholders, setting up dedicated planning units, and announcing national strategies for coherent actions. Main challenges in the EU are combating the continuously increasing demand from the ageing population, the ageing HWF, the territorial imbalances of HWF supply, and the high rates of outflow mobility of professionals. Additionally, new challenges emerged. Strengthening primary care, providing appropriate skill-mix and task shifting in interprofessional teams are crucial concerns, along with the supportive working environment, incorporating digital health solutions and advanced technology into daily scope of practice.

Governance plays a key role in stakeholder-engagement, and dialogue supports improving tools for HWF development.

Accelerating knowledge transfer of good practices contributes to effective HWFdevelopments adapted to national contexts.

The importance of mobility data in health workforce planning

Livia Langner, Hungary, E Kovác (Hungary)s, P Szegner (hungary), M Szocska (Hungary), M van Hoegaerden (Belgium), B Snyers (Belgium), W Sermeus (Belgium)

Health workforce mobility inherently shapes the composition of health care systems. Effective health workforce planning requires clear understanding of HWF dynamics, specific stock and flow data, and the consideration of mobility data in the minimum planning data requirements.

In the frames of the SEPEN tender (funded by the Consumers, Health, Agriculture and Food Executive Agency 2016 73 01) a mapping exercise was carried out to gather evidence on national HWF planning and policies. The mapping exercise aimed to gather detailed information and description of HWF planning systems and policies in each EU Member State by exploring HWF planning, data, stock and mobility, HWF policies, density at sub-regional level and future challenges of HWF development. The objective of this paper is to describe the latest country practices of mobility data collection and utilization for policy making in the EU.

Research results from the last 5-10 years showed that mobility requires systematic monitoring, particularly in countries experiencing significant mobility flows. Indicating shortage of specialist, geographical maldistribution, reliance on foreign HWF are prevalent phenomena across many countries. Reliance on foreign HWF is highly prevalent in countries e.g. Germany, Ireland or Luxembourg, while the rate of foreign students is high in Belgium and Bulgaria. Reliable flow data is collected and taken into consideration among Member States e.g. Belgium, Finland, Hungary and Bulgaria. Some countries are still lacking adequate amount of data to track flow of professionals, e.g. Austria.

According to the experience gained so far in the SEPEN project, measuring flow of different professions of HWF, and monitoring mobility patterns might be key in HWF development and policy decisions. Evidence-based policy interventions require the continuous development of data collections in order to analyze the current stock and flow data, assess current situation, prepare projections and forecasts, and to design and develop appropriate actions to manage mobility.

Collecting mobility data is key in detecting mobility pathways and in addressing and tackling health workforce shortages and surpluses.

Measuring the flow and monitoring mobility patterns of health workforce might be key in health workforce development.

Trainees who started and completed HCA training in Portugal between 2011 and 2018: how many, who and where are they?

André Beja, I Craveiro, T Correia, P Ferrinho (Portugal)

Healthcare Assistants (HCA) are support workers indispensable for the functioning and sustainability of health services. As in other European countries, HCA are a considerable part of the Portuguese health workforce and the lack of evidence about their profile, training and activity makes it difficult to manage human resources at present and compromises the planning and adaptation of health systems to face demographic and epidemiological challenges. In Portugal, initial training and education for HCA was established in 2010 and its results are yet to be studied. As part of a policy analysis investigation that seeks to deepen knowledge of this intervention, the aim of the study that we'll present is to understand who are the HCA trained until 2018 by the description of the new students enrolled and those who completed it in terms of number, gender, geographic distribution and training attended.

Through the exploratory analysis of quantitative data obtained from the ministries of education and labour, it was possible to characterize the trainees who started and completed the initial training during this period, as well as their distribution in the seven statistical regions of Portugal (NUTS II). It was also possible to characterize a group of people who have completed TAS training units in the context of short courses, acquiring some competence for care. HCA's work is fundamental and, in general, invisible. The growing importance of their role has attracted the attention of researchers, concerned with the need to reinforce and standardize their training and, eventually, their responsibilities.

In addition to contributing to this effort and breaking this invisibility, the description of the availability of qualified work force that can act as HCA and caregivers at national and European levels is innovative in the Portuguese context and contributes with evidence for better management and planning.

HCA are an important and unknown part of the health workforce, that needs to be known for better planning and management of human resources.

In Portugal, the initial HCA course has been in progress since 2010, qualifying workers who can also act as HCA in Europe. This study helps to understand how many, who and where these workers are.

Comparative analysis of the health workforce in Post-Soviet countries

Milena Santric-Milicevic, NB Boskovic, SM Milicevic (Serbia)

Current data has consistently shown that health worker densities affect the health of populations. Therefore, it is imperative to analyze the differences in health worker densities among the currently-evolving health systems of the fifteen post-Soviet countries.

Methods: Using available and most recent data from the WHO Global Health Workforce database and the European Information Health Gateway database, the study analyzed public healthcare expenditure and health worker densities (physicians, nurses and midwives, pharmacists, and skilled health professionals) in the public sector.

Results: The study found that 7 out of fifteen of the former Soviet countries allocate a proportion of gross domestic product per capita (PPP) to health that is less than the average for these states. Estonia allocated the highest percentage of its PPP to health while Tajikistan allocated the least. The study found that Georgia had the greatest density of physicians but the smallest density of nurses and midwives. The greatest density of pharmacists was found in Latvia and the greatest density of skilled health professionals in Belarus. The lowest density of pharmacists was in Ukraine and the lowest density of skilled professionals in Tajikistan.

Conclusion: Our study shows the diversity in the developing public health workforce in each of the post-Soviet countries. The variability of health worker densities between countries and within each country highlight the varied pace each has taken when transitioning their health systems.

Among the fifteen former Soviet countries, EU countries exhibit a higher GDP per capita (PPP) allocated to health.

Health systems are always evolving and ones that are undergoing lengthy transition periods can provide valuable lessons learned to other countries with transitioning public health systems.

How can legal definitions support skill mix adaptation in France

Louise Luan, Y Bourgueil (France)

As other countries, evolution of health professionals (HP) roles in France is a key issue to adapt health care services to the epidemiological transition and economic constraints. However, legal definitions of health professions restrain skill mix flexibility and evolution.

Methods: To consider legal framework adaptations, we studied the French law and "grey literature", including comparative work of European countries laws.

Results: In Europe, HP can be described by three legal criteria. First is qualification, including HP degree, continuing education and recertification. Second is legal skills, defined by legal lists of tasks and/or scopes of practice. Third is missions (health protection and promotion). Missions represent objectives focused on the beneficiary and give more autonomy to non-medical HP. These criteria are often combined (qualification being systematic). Two types of legal combination emerge. Countries with medical monopoly predominance and which regulates relationships between HP (France, Belgium, Romania), and countries with a lighter monopoly and more autonomy for non-physicians (UK, Germany, Spain). Missions widen HP' areas for action, and inter-professional cooperation, with less need for delegation of tasks' protocols (UK, Spain). In France, health professionals are divided into medical professions, pharmacists, and medical auxiliaries. Nurses' definition relies mainly on lists of acts and scope of practice, whereas midwives and osteopaths have a less strict definition based on scope of practice (birth/contraception and functional troubles respectively). Skill mix (i.e. substitution/delegation) is actually defined on a derogation basis in the Public Health code and limited by protocols.

Conclusion: Shifting from strict lists of acts to definitions more based on missions would promote skill- mix flexibility between HP in France. This requires reinforcement of qualification level, and continuous skills development.

Developing skill mix requires common health professionals' objectives

Skill mix could be promoted by shifting to missions in legal definitions.

The trends of physicians in the public health sector in Montenegro

Marija Palibrk, M Palibrk, N Terzic (Montenegro)

The available, sustainable, competent and equitably distributed health workforce is a crucial resource for the efficiency of health care system and quality of health services. In 2013, the national strategic plan of human resources in health till 2022 in Montenegro was adopted with main goals concerning availability of physicians. The aim of the study is to examine trends of physician coverage in the public health care system in Montenegro.

Methods: The routinely collected national data on physicians in Montenegro from 1999-2018 was analyzed using Joinpoint regression analysis. Annual percentage change (APC) in physician density rates and their demographic characteristics with 95% confidence interval (95%CI) was assessed.

Results: The number of physicians per 100 000 increased almost 50% between 1999 and 2018. The average percentage change from 2013 -2018 was 5.8% (95%CI 0.6-13) compared to APC of 0.9% (95%CI 0.6-1.3) from 1999-2013. In the same period, the increase of specialists was slower with APC 1.3% (95%CI 1.0-1.6). The highest increase in number of physicians was observed in age group over 55 years by 5.9% per year (95%CI 4.7-7.1) and in age group less than 34 years by 3% per year (95%CI 1.7-4.2). Female physicians are dominant in medical profession and their number increased by 2.7% per year (95%CI 2.3-3.2).

Conclusions: The increase of physicians in Montenegro corresponded with the national strategic health workforce plan. The projected number of physicians till 2022 (260 physicians per 100000) was already achieved. Although aging of physicians is apparent, the number of younger physicians in public health sector has been rising since 1999. Nevertheless, the sustainability and the retention of health professionals need to be considered carefully by policy makers. Also, the competencies and the appropriate distribution of physicians should be also taken into account for the health workforce planning.

The impact of aging and feminisation of medical profession, as well as the inflow of young health professionals and their distribution should be considered in health workforce planning.

Regular evaluation of strategic acts on human resource in health is necessary for monitoring progress and setting health policy priorities and planning.

Evidence on health workforce effectiveness of hospitals in Sub Saharan Africa

Philipos Gil (Ethiopia), M Buljac-Samardzic, JJ Van De Klundert (Netherlands)

Healthcare systems, particularly hospitals in low income countries (LICs) mainly in Sub-Saharan Africa (SSA) face major health work force labour issue challenges while having to deal with extraordinary high burdens of disease. While, in general the relationship between HRM and hospital performance is extensively investigated, most of the underlying empirical evidence is from western countries, and may have limited validity in SSA. Evidence on this relationship for SSA hospitals is scarce and scattered.

We present a systematic review of empirical studies investigating the relationship between HRM and performance in SSA hospitals. Following the PRISMA protocol and searching in seven data bases yielded 2252 hits, and a total of 111 included studies. From an HR perspective, most studies researched HRM bundles that combined practices from the practices domains motivation enhancing, skills enhancing, and empowerment enhancing. Motivation-enhancing practices were most frequently researched, followed by skills enhancing practices and empowerment-enhancing practices. Training and education were the most researched single practices, followed by task shifting. From a performance perspective, our review reveals that employee (nurses, physicians, midwives) outcomes and organizational outcomes are frequently researched, whereas behaviour change communications, team outcomes and patient outcomes are significantly less researched.

Most studies report HR interventions to have positively impacted performance in one way or another. Our analysis doesn't allow to present a structured set of effective one-to-one relationships between specific HR interventions and performance measures. Instead, we find that specific outcome improvements can be accomplished by different HR interventions. Coordinated research efforts to better understand contexts, workforce challenges and to advance the evidence base are called for.

No structured set of effective one-to-one relationships between specific HR interventions and performance measures.

No understanding of contextual factors.

Distribution of workforce in dentistry in Cluj region

Ondine Lucaciu, R. Bordea, NB Petrescu, I-C Mirica, O Aghiorghiesei, A Mester, M Aluas, RS Campian (Romania)

The Cluj region has shown steady growth in the dental workforce over the last 20 years. Although the number of dental colleges has significantly increased in the last decade, there is not any study so far that described the status of the licensed dentist workforce in Cluj region. The present study aimed to explore the demographic distribution and professional characteristics of licensed dentist workforce in Cluj region.

Methods: This was a retrospective descriptive study using the College of Dentists from Cluj Napoca database to identify the number of licensed and registered dentists as well as their professional and demographic characteristics in the last 10 years. Data were categorized based on gender, nationality, dental specialty, health sector, geographic location, and professional rank.

Results: The number of licensed dentists working in the Cluj region in 2010 was 895, out of which 586 were women and 312 males, the number increased to 1385 in 2019, 786 women dentist and 599 male dentists. Doctors were working in 598 dental offices in Cluj region 2010, while in 2019 the number of dental offices increased to 1014. On average 40 new dental offices are opened every year in Cluj, were in the neighboring areas like Campia Turzii, Dej, Gherla, Turda only one dental office is opened.

Conclusions: Most of the dental care in Cluj region is provided by dentists in the private health sectors. There is a big discrepancy between the rural and urban areas of Cluj region in term of workforce distribution. As dental service availability is one of the determinants of oral health status politics should aim to increase dental services availability by increasing the number of dental services in the public health sector and by covering also the rural area of Cluj region.

Dental service availability is one of the determinants of oral health status.

Politics should aim to increase dental services availability by increasing the number of dental services in the public health sector and by covering also the rural area of Cluj region.

Increase of salaries as strategy for preventing migration of young doctors: Romanian experience

Florentina Furtunescu, M Georgescu, DG Minca, BC Pana, A Dragoescu (Romania)

Preventing migration of the health staff became a priority on the political agenda in Romania following to EU accession and in the context of the mutual recognition of the medical professions. A new regulation stipulating considerable increase in salaries for doctors and nurses working in the public sector became active since March 2018. Our study aimed to reveal the influence of the increased income on the decision to leave the country among graduates of the biggest public medical university from the country.

Methods: A specific questionnaire focused on the intention to leave the country was applied among 1514 graduates of medicine from 2016 (before the salary law) and 2018 (first year with increased salaries). Intention to leave was analysed among cohorts and groups of specialties (medical, surgical, para-clinical and family medicine). Data were compared using SPSS v.23.0. T student and Chi2 tests were performed for scale and nominal variables respectively.

Results: The two cohorts were similar as gender (p=0.908, Chi2 Test) and age (p=0.089, T student test). In 2016, 68%, 24%, 6% and 2% were in favour of medical, surgical, para-clinical and family medicine specialty group and no significant d=changes occurred in 2018 (p=0.858, Chi2 Test). Intention to leave the country for residency reached to 19% in 2016 and did not change significantly in 2018 overall (p=0.741, Chi2 test) or by group of specialties.

Conclusions: One in five medical graduates has the intention to leave the country for specialization. Salary increase in public sector appears to not influence this intention on short term. Further research is needed for measuring changes of this intention on a longer term and for understanding the main triggers of motivation.

Motivation of medical graduates to leave the country for specialization seems to remain high despite the salary increase for the public sector.

Further research is needed for defining effective policies to limit this motivation.

Social responsibility skills of future managers in in health care organizations: focus on the EHESP-French School of Public Health

Estelle Baurè, C Harpet, A Lefébure (France)

EHESP School of Public Health is the cradle of the professional culture for all the managers and high civil servants of the Health and Welfare system in France. If, by OMS standards, “Public Health is defined as “the art and science of preventing disease, prolonging life and promoting health through the organized efforts of society”, EHESP has in its "DNA" a strong sensitivity for all aspects of social responsibility. Conscious of its role as a leader in public health training and research, the School has the ambition to impulse process for behavioral changes and thus lay the essential foundations for collectively meeting the Sustainable Development Goals (SDGs) of the United Nations. In January 2020, EHESP obtained the French sustainability certification, called „sustainable development and social responsibility (SD&SR) label“ This label approves the plan implemented by the school and the quality of its actions in the field of SD&SR. At the same time, EHESP and a large group of French higher education institutions signed a first open letter to commit to " address the climate challenge by training all civil servants " and a second one "for a higher education to keep up with the ecological stakes".

Today’s objective is clearly to implement a "climate change, transitions and health" skills-set, which integrates the SD&RS dimension for all EHESP training programs. The common teaching core aims "to train learners to a systemic, prospective and collective vision of tomorrow's world by integrating a sense of responsibility while preserving an ethical vision, and by allowing and supporting the necessary changes".

To find answers to these challenges, building new common core of transversal knowledge, skills and culture will allow to develop the three following skills: 1) analyse a health situation through the perspective of SD&SR issues, 2) implement strategies to integrate SD&SR issues and 3) develop advocacy to mobilize the professional environment on SD&SR issues.

Engage every component of institution in a sustainability and social responsibility strategic plan.

Train health care organizations future managers to the challenges of the Corporate Social/Societal Responsibility.

Advocacy for the specialised health workforce: the case of rheumatology physicians in Germany

Ellen Kuhlmann, D Ernst, A Jablonka (Germany)

Comprehensive health workforce governance frameworks and assessment tools are available, such as the National Health Workforce Accounts (NHWA) and the WHO Health Workforce Framework 2030. However, health workforce development focuses on large professional groups and does not provide sufficient guidance for small medical specialties. This study aims to reveal blind spots in health workforce governance, using rheumatology physicians in Germany as a case study.

Methods: The study applies an explorative approach. A rapid review of the literature was undertaken combined with public statistics, document analysis and expert information.

Results: Health workforce density is overall high in Germany compared to other OECD countries and comprehensive monitoring and planning systems exist, yet there is shortage of physicians specialised in rheumatology. This hampers access to specialised care and causes serious delays in diagnosis and treatment, which may have long-term effects on patients' health and well-being. These problems will reinforce in future. Over recent years, annual inflow of new rheumatologists was constantly below 30 to 50 physicians, which cannot fill the gaps. Survey data reveal that half of the future rheumatologists favour part time employment. Furthermore, training capacities have not adequately been expanded and no policy is in place, which might respond effectively to future demand for rheumatologists in Germany.

Conclusion: Highly specialised health professions with small numbers and long duration of training are facing specific workforce challenges. Next to comprehensive health labour market data, greater attention is needed to expand education and training capacities and to improve recruitment strategies. Existing gaps may cause serious risks for quality and access to services as well as long-term costs.

A call to action to integrate the specialised health workforce in planning and policy and improve governance.

Rheumatology physicians in Germany faces severe shortage, which will increase in future and may hamper quality and access to care.

Building public health workforce capacity in the medical field from Tunisia

Madalina A Coman, O Oltean, RM Chereches, E Bozdog (Romania)

The public health system from Tunisia is continuously developing and higher institutions are important actors that create the necessary fork force in this field. The CONFIDE project is funded by the EC through Erasmus+ programme and aims to create workforce capacity in the public health field by developing a research into policy training program in four universities from Tunisia.

Methods: The Research into Policy training program had three modules: public health research, health promotion and evidence-based public policy. The first step of the program was to create Centres for Evidence into Health Policy (C4EHPs) in all the Tunisian partner universities. The next step of the program consisted in the training offered through the following phases: (1) train the trainer sessions – the European experts created capacity in Tunisia by training trainers; (2) shadowing sessions - the trainers participated in shadowing sessions in the European partners institutions; (3) training delivery – the CONFIDE trainers, assisted by the European experts, delivered the training to trainees (4) internships - the trainees participated in internships in local health institutions.

Results: Eighteen trainers were formed and participated to the shadowing sessions at Babes-Bolyai University, Universty of Southern Denmark and University of Trnava. A number of 25 trainees have graduated the program, and 14 of them have started their internship so far.

Conclusions: The program was received with enthusiasm and extended to a fourth University that was not initially included in the project – University of Monastir. The Tunisian partners expressed their interest to continue implementing the training in their universities, this being a potential impact on new curriculum reforms in the participating universities.

Public health initiatives are well received by the Tunisian medical universities.

Capacity building programs have the opportunity to reform educational curricula to include public health topics.

Universal health coverage and health worker maldistribution in the European Union: solidarity versus subsidiarity

Corinne Hinlopen (Netherlands)

Health worker mobility, in a European Economic Area with freedom of movement, benefits richer countries and undermines weaker health systems in Central, Eastern and Southern European countries, thus contributing to health inequalities in the European region. This contrasts with the European Union's ideal of shared prosperity. To achieve Universal Health Coverage (UHC) in the whole European Region, higher level policy solutions are required.

Description of the project: The EU-funded Health Workers for All Programme (2013-2016) was an advocacy action to strengthen health workforces in eight countries. It explored possible contributions such as: better data collection for better policies; improved working conditions; cross-border solutions for existing shortages; enhanced planning and forecasting capabilities; increased awareness of existing principles for ethical international recruitment.

Results: The program resulted in stronger advocacy by programme partners, including improved monitoring of efforts to strengthen national health workforces; high level discussions on the applicability of principles for ethical international recruitment; increased collaboration between civil society, professional associations, trade unions, employers' organizations and policy makers; dialogues with European Parliamentarians. The programme increased awareness of the problem and contributed to national solutions to health worker shortages, but concluded that better access to a health worker, for all in the EU, requires European level policy measures.

Lessons: The right of European workers to move freely in the European Economic Area is a great good. But excessive health worker mobility resulting in maldistribution needs to be tackled: by governments, to make their health workers want to stay; by 'Europe', to introduce measures to mitigate unintended effects. Without action at central level, UHC in the whole European Region remains unattainable.

Maldistribution of health workers delays Universal Health Coverage in Europe.

Shared prosperity requires solidarity between Member States, prevailing over national interests, and calls for European level policy measures.

Breaking the silos: a roadmap to address the equality, diversity and inclusion challenges in the ever-changing healthcare landscape

Valia Kalaitzi (Netherlands/ Greece)

As demographics continue to change dramatically and the need to have the best talents from all backgrounds increases, the equality, diversity and inclusion challenges in health workforce remain tenacious and growing. Although several healthcare organizations have developed EDI plans, impediments to the successful implementation of such plans coupled with the highly sensitive nature of the topic reinforce the inevitable resistance. Thereby, an EDI roadmap modelled after change management theory may be needed. This study aims to catalyse a dialogue on the development of a realistic EDI roadmap to advance the equality, diversity and inclusion agenda, to address the challenges and embrace the opportunities that may occur and to maximize the potential of a diverse and inclusive healthcare organization.

Methods: The organizational change management theory underpinned by transformational leadership approach was adopted. A scoping review was applied to assess the nature and extent of research evidence. Thematic analysis was used to code the key informants; qualitative analysis was followed to critically assess the themes, provide deeper contextual insights and build theory for improvement.

Results: Preliminary results identified a seven steps EDI roadmap in healthcare organizations: 1) prioritize EDI in organization's strategic management, 2)secure the collaboration and commitment of the entire leadership team, especially the senior, 3)develop a customized EDI plan and commit publicly 4) communicate clearly, transparently and in any possible way organization's commitment to EDI plan, 5)collect disaggregated data and report regularly on progress, 6)mandatory training of current and future workforce, 7) create an EDI compliant pipeline for recruitment and promotion of health workforce.

Conclusion: The systematic implementation of an efficient EDI roadmap in healthcare organizations may state a clear business case for achieving a genuine diverse and inclusive workplace.

Championing equality, diversity and inclusion builds a good business case in healthcare organizations

The inevitable resistance against a truly diverse and inclusive workplace requires a strategic and realistic roadmap drawn upon change management theory and practices

The SOHE Bridge Project – streamlining bridging studies for obtaining professional rights

Aino Ezeonodo, K Matinheikki-Kokko (Finland)

Professionals trained outside the EU / EEA are not allowed to work in regulated Social and Health Care professions in Europe without professional recertification. This have been criticized for being challenging, lengthy and complex as well as lacking clarity in Finland. At the same time, there is shortage of workforce in the local and global labor market. SOHE Bridge -project (ESF 2018–2020) has tackled this dilemma by promoting employment of immigrants with a higher education degree in social and health care through bridging program.

Methods: The intervention study approach was applied as a methodological approach allowing the exploration of complex competence issues in the real-life training and employment settings. The multidisciplinary team of 32 health care and four Finnish language teachers from four UASs have implemented the bridging training modules. By February 2020 over 100 immigrant nurses and 10 other health professionals have been participating in the training modules involving mapping of the professional and language competencies, guidance, work placements and simulated competence evaluation. The national authority (Valvira) verifies participant's professional documents authenticity.

Results: The bridging program consist of further education modules offered mainly as an online format. These modules combining professional substance and language studies include theoretical learning and practical application. All modules support developing occupation-specific language skills and work readiness leading to faster process in professional recertification and better workplace integration. The intervention study approach allowed for a detailed study of educational interventions in real life resulting effective and flexible training to meet the demands of working life.

Conclusions: As a result of the systematic cooperation of experienced staff and stakeholders at different levels, a national model for future bridge programs is proposed.

Increased professional recertification and job integration are proof of the success of the bridge programs.

Long-term funding of bridge programs will be the key to ensuring their sustainability.

Livestream: How to educate the health workforce and improve leadership? *Chair: Ellen Kuhlmann*

Professionalization of the public health workforce in the European region

Kasia Czabanowska, ASPHER Vice President/ Past President, University of Maastricht (Netherlands)

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.

Conclusion

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.

Human Resources for Health leadership and management program: answering to the training needs of the health workforce

Cátia Sá Guerreiro (Portugal), A Aguiar (Brazil), W Made (South Africa), G Cometto (WHO Geneva), Z Cserháti (Hungary), M Dal Poz (Brazil), P Ferrinho (Portugal), E Kovács (Hungary), U Lehmann (South Africa)

Capacity for effective governance and stewardship is a key enabler of appropriate design and implementation of human resources for health (HRH) policies. In the context of the Global Strategy on HRH: Workforce 2030, World Health Organization (WHO) was given the responsibility to develop "an internationally recognized, postgraduate professional program on HRH policy and planning".

In 2016, a survey was carried out allowing to identify and analyze existing human resources development courses globally with a view to inform WHO's future efforts in this domain. On the basis of the findings, WHO Head Quarters contracted with a consortium of four academic collaborating centers from Brazil, Hungary, Portugal and South Africa the development of a training package for HRH leadership and management.

The package, focused on "HRH Leadership and Management", addresses the leadership of the health workforce around the different components of the health labor market, including the driving forces that affect the supply and demand of the workforce, both within the countries and globally, from three perspectives: I) Master's Degree; ii) One month course; and iii) Short executive course. The three courses aim to develop competencies to strengthen leadership competencies for Health Workforce development, namely: policy and planning; management; communication; HRH intelligence; Information and Communications Technology and data management and analysis; and research.

This courses can be an opportunity for the HRH development in the different countries that will join it. This presentation will address the challenges in developing the courses and the solutions proposed.

In order to achieve Universal Health Coverage it is necessary to invest into a knowledgeable, skilled and motivated health workforce.

The HRH leadership and management courses aim to develop competencies to take up leadership role in the field of health workforce, answering to the Global Strategy on HRH: Workforce 2030 from WHO.

Development of a European Centre of Excellence (CoE) for Research in Continuing Professional Development

Catherine Fitzgerald, T Kearns, Royal College of Surgeons (Ireland)

The recently established European Centre of Excellence for Research into Continuing Professional Development aims to develop a pan-European network of researchers, clinicians, regulators and professional bodies to advance the science of CPD through research and foster knowledge exchange to promote best practices in CPD that can be translated across Europe. A driving force of health professionals' being core leaders in quality and safe person-centred care is the moral imperative of commitment to CPD. With increasing health professional migration along with the cross-border mobility of health professionals in Europe, access to information regarding best practice for CPD is a strategy to ensure healthcare quality and safety. Knowledge of CPD as a science-based phenomenon, which is rooted in science-driven activities are motivators of healthcare professionals to change behaviours and promote patient safety. The primary objective of the Centre is to facilitate knowledge exchange via collaborative partnerships to implement a research agenda that underlies CPD activities and its impact on patient outcomes, healthcare organizations and patient safety. Currently the Centre has members from 20 European countries. Three research-working groups (RWG) initiate building the COE structure. The aim of the RWG's is to organize, co-ordinate and develop key CPD research activities. The Centre collaborates with experts in specific fields to guide its initiatives. Interdisciplinary collaboration among researchers permeate the activities within each working group. The Centre's key focus is collaboration with European partners and stakeholders that enables the sharing of resources, supports the transfer of knowledge and creates synergy to achieve common goals. There are significant gaps in areas of CPD research which provides an opportunity to work together to address these gaps, to support healthcare professionals and their organizations to improve healthcare outcomes.

Development of a European Centre of Excellence (CoE) for Research in Continuing Professional Development to advance the science of CPD.

Work collaboratively with European partners and key stakeholders to implement a research agenda that underlies CPD activities and its impact on patient outcomes, healthcare organizations and patient safety.

Learning from COVID-19, strengthening global health in medical education: the perspective of students

Annika Kreitlow, S Steffens, E Kuhlmann, Medical School Hannover (Germany)

COVID-19 has demonstrated the local–global interconnectedness. This study aims to strengthen global health in medical education and training. Major objectives include: to assess demand for global health education in the group of students and staff/teachers and the impact of COVID-19; to identify key areas of global health to be included in the curriculum; to explore demand for organisational support.

Method: Online surveys were carried out at Medical School Hannover, Germany, drawing on an established evaluation system for teaching. Target groups were undergraduate medical students (n=384) and teachers (n=172). Material was gathered in March/April 2020. The surveys draw on a written questionnaire, specified for the two groups, comprising standardised items (primarily likert-scales) and open questions. Descriptive statistical analysis and content analysis were undertaken.

Results: Demand for global health education has increased markedly in all groups, but strongest in the group of students in the preclinical phase. This included a broad range of topics, e.g. medical issues like immunisation and tropical diseases, as well as health systems and policy, climate and environmental health. Students expressed mixed perceptions regarding information and support provided by the university during the pandemic, while teachers were much more positive. Furthermore, teachers showed strong interest in education tools and institutional support to improve competences in global health. Students felt that global health education helps them to be prepared for their future job, but this perception was weaker among teachers.

Conclusion: There is evidence for demand for global health in undergraduate education and training of doctors which will increase in future. The material provides suggestions on the substance of global health education and the management tools and incentives, which may support sustainable implementation of global health education.

Students are an important driver and a source of innovation towards strengthening global health in medical education.

Organisations must support teachers in building competences in global health.

Comments

Șoimița Suciu, Dean of the Cluj-Napoca Medical School, Romania;

Todorka Kostadinova, Vice President of the University of Varna, Bulgaria;

Monica Brînzac, EUPHAnxt Representative;

A large observational study of burnout and quality of patient care in English General Practices

Maria Panogioti, C Grigoroglou, A Hodkinson, S Zghebi, D Ashcroft, E Kontopantelis, C Chrew-Graham, SD Lusignan, A Esmail (UK)

There is international evidence that burnout in doctors is associated with less safe patient care but not in the UK. This study aims to a) identify characteristics of GPs and practices associated with burnout in GPs; b) examine whether higher scores of burnout reported by GPs are associated with markers of suboptimal patient care focusing on potentially hazardous prescribing and hospital referrals.

Methods: The primary data source for patient data was be the Royal College for General Practitioners Research and Surveillance Centre (RCGP RSC). GPs working in 70 general practices completed a brief bespoke questionnaire to assess burnout using an abbreviated version of the Maslach Burnout Inventory. Patient data contained in the RCGP RSC were linked with the bespoke questionnaire responses of individual GPs. Multiple regression analyses were performed to examine whether burnout was associated with GP factors and practice factors. Two-level mixed-effects linear regression models were applied to estimate the amount of variance in each patient care outcome attributed to burnout level of GPs.

Results: A total of 340 GPs across 82 general practices completed the bespoke questionnaires and their data were linked to 345 thousands patient records. GPs with increased symptoms of burnout were more likely to be women, younger, report intentions to leave the practice, lower job satisfaction, and increased presenteeism. Analyses are currently undertaken to examine associations between burnout in GPs with hospital referrals and potentially hazardous prescribing of antibiotics and opioids.

Conclusion: This is the first large quantitative study to examine the link between burnout and suboptimal patient care in general practices. The findings support the need to regularly assess and mitigate burnout in general practices in the UK.

Burnout of GPs is a serious risk for health workforce retention and quality, and efficiency of healthcare.

Women and younger general practitioners are at higher risk for burnout.

Stretched, strained and unsustainable: the impact of working conditions on the retention of hospital doctors in Ireland

John-Paul Byrne, E Conway, A McDermott, J Creese, N Humphries (Ireland)

The medical workforce in Ireland is experiencing a recruitment and retention crisis marked by high rates of emigration and burnout. The frontline experience of hospital doctors is subsequently shaped by staffing shortages and pressurised working conditions. This paper investigates the relationship between hospital doctors' working conditions, work-family conflict (W-FC) and considerations of exit from the medical workforce in Ireland.

Methods: We conducted a cross-sectional, online survey of hospital doctors currently working in Ireland in October and November 2019 (N=1070). We test several moderated mediation models to investigate the relationships between temporal job demands, W-FC, opportunities to adjust rostering, and doctors' considerations of withdrawal/exit from the Irish healthcare system.

Results: Temporal job demands are associated with W-FC amongst hospital doctors in Ireland, particularly junior doctors. Preliminary analysis indicates that (i) W-FC mediates the relationship between temporal demands of work and considerations of withdrawal/exit from the Irish healthcare system, and (ii) ability to adjust their roster (temporal autonomy) moderates the relationship between temporal demands and W-FC.

Conclusions: Hospital doctor retention is an urgent issue in Ireland. 50% of doctors surveyed have considered emigrating to practise medicine in another country over the last 6 months. The retention of Irish hospital doctors involves addressing the impact of stretched workforces, strained working conditions, and the sustainability of working practices for hospital doctors at the frontline. To promote retention, we need system-wide solutions to the W-FC faced by many within the medical workforce.

Work-family conflict is highly prevalent among hospital doctors in Ireland.

Doctor retention policies must address the sustainability of working time practices for hospital doctors.

Workforce factors affecting the emergence of Primary Care Units in Austria

Eva Krczal, A Franczukowska, A Braun (Austria)

The emergence of primary care units is lacking behind the expectations of policy makers. This research analyses the evolution of primary care units by exploring in-depth the experiences of the initiative from the perspective of general practitioners. Their perspectives on design features and supporting environment, their acceptability of the pilot and their experiences in working in a primary care unit have been explored.

Methods: The study includes problem-focused interviews with general practitioners working in primary care centres, focus group discussions with general practitioners working in single practices, secondary data on focus group discussions with medical students. A semi-structured questionnaire was developed for the individual interviews and focus group discussions. Transcripts have been evaluated according to the content analysis (Mayring) for the interviews and documentary method (Bohnsack) for the focus group discussions.

Results: Analysis revealed 9 codes including (1) Status of general medicine and the general practitioner in Austria; (2) Professional acceptance of Primary Care Units; (3) Between cooperation and competition; (4) Hesitation from the young generation; (5) Reluctance from sole practitioners; (6) Personal drivers for starting a pilot (7) Challenges during set-up phase; (8) Challenges during growth phase; (9) Working conditions in primary care units.

Conclusions: Implications can be drawn for the strategic planning and the implementation of the change process. To promote the emergence of primary care units, system changes have to be made to improve education and training for general practitioners, to adapt compensation schemes and to define more clearly the competences of physician and non-physician professions working together in a primary care unit. Further, initiatives should be introduced to provide information and advice for practitioners striving for founding or entering a primary care unit.

The success of health care reforms also depends on the engagement of the health workforce.

Health care reforms need strategic human resources planning for a smooth implementation.

Health workforce and primary task: practice and people

Marija Jevtic (Serbia/ Belgium)

Due to the significance of health sectors, a persistent analysis of new ways of improving work in health sector is very important. Today health systems represent a special challenge for studying group processes and dynamics inside them. An innovative approach of systems-psychodynamic organizational consulting could improve leadership in health institutions. Health organizations (the primary, secondary or tertiary level) have some common organizational characteristics, determined by the Law on Health Care and other regulations, but also a lot of diversity in organizational culture. The boundaries of organizations in health are less rigid than before, and less tight. Professional and other networks of influence are more developed; the openness and flow of information are more present, as well as partnership and cooperation, but also mobility, mechanisms of disintegration, which are all the more visible in the health sector. Health organizations follow the changes which happen in all other sectors. It is necessary, therefore, to develop the awareness of risks and knowledge about managing the risks of modern organizations of managers, employees and members of the health care organization, in order to overcome disintegration and crisis of trust to the best possible measure. Instability is present in health organizations as in all others, so it is necessary to look for the ways of sustainable functioning. Health organizations are subject to the influence of numerous outer factors, as well as all other organizations and individuals. Relations in health organizations are consequences of external factors, but also of internal norms rooted in them. Having in mind the state of the health sector, this paper represent possibility of using the psycho-dynamic organizational approach in work with organizations of health sector. Psycho-dynamic organizational approach in work with healthcare workforce influences the development of work results in the health system.

An innovative approach of systems-psychodynamic organizational consulting could improve leadership in health institutions.

Psychodynamic organizational approach in work with healthcare workforce influences the development of work results in the health system.

Using online messenger for teaching health promotion and mentoring skills

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Considering ongoing medical education and healthcare system reform in Kazakhstan, there is an urgent need for training primary healthcare professionals more comprehensive skills on health behavioural interventions and mentoring. In the framework of project-based education in general practitioners training. The objective of the developed program was to train bachelor students studying General Medicine healthy eating principles using WhatsApp messenger, and to train mentoring skills to interns. Course was designed by blended learning principle, having 20% of content presented offline and 80% of content presented online. The course consisted of 1 kick-off meeting, where each 2nd year intern was matched with two bachelor students. Online content was presented by 5 audio lectures. The content was distributed through WhatsApp group where bachelor students and interns were added. Individual trainings and consultations were provided by intern through smaller WhatsApp to bachelor mentees. Knowledge of healthy eating principles was measured by test after finishing of distribution of the online content. Overall perception on course was gathered through semi-structured interviews. 10 interns were enrolled in the class and recruited 20 bachelor students. By the end of the course 14 bachelor students retained. To measure results, on acquired knowledge we disseminated self-administered online based questionnaire after the online content was over. Questionnaire consisted of 10 questions on main healthy eating principles. Mean of right answers was 80%. Mentoring skills were measured by semi-structured interview. Interns reported that using WhatsApp is easy and convenient, it gives opportunity for spending more time talking to mentees. Bachelor students during semi- structured interview pointed out that content was easy to understand and remember. Preliminary results showed that using short messages through WhatsApp is promising way for health promotion training.

Blended learning course using short audio lectures is promising way of teaching health promotion skills and knowledge.

Mentoring skills practice could be provided through online communication tools.

Brain drain of graduate students of medicine at the Faculty of Medicine University of Belgrade

Biljana Buljugic (Serbia)

The Faculty of Medicine University of Belgrade is the largest medical institution which educated medical doctors and nurses in the region of Balkans, through accredited integrated medical studies for doctors which lasts for 6 years and 4-year program for nurses. A total of approximately 500 students graduate each year at the Faculty of Medicine, and there are no official data on their further employment status available. In this study we explored motives of graduate students for requesting personalized curricula which will support them in seeking employment.

Methods: From 2016 to 2019, the Centre for quality Assurance of the Faculty of Medicine has received requests from 374 graduate students of medicine to issue personalized curriculums that include detailed plan and program of studies for the purpose of employment out of Serbia. Requests' data were analysed and described for the purpose of this study. Data include total number of graduate students, the purpose of the request, year of enrolment and graduation, employment status in Serbia, specialization residency status and reason for issuance of the curriculum, country for which they apply for employment.

Results: Total of 274 graduates are unemployed or holding volunteer positions at hospitals or clinics in Serbia, 44 are employed and 34 working out of field of medicine. Of the total number of requests, 332 medical graduates are in the process of submitting the documents for "approbation" status in Germany, 6 for Norway, 3 for Great Britain, 9 for Croatia, 18 for Montenegro, 4 for Slovenia, 2 for Switzerland.

Conclusion: This study shows a high number of medical graduates without employment in Serbia, who prepare for official submission of documents in other countries for employment. Sustainability of the medical workforce is therefore a main issues of the healthcare system in Serbia.

The survey could be used for further action plans of creating sustainable health workforce and work environment in order to retain medical graduates in the country.

Livestream: How to manage transnational mobility of the future health workforce? *Chair: Marius Ungureanu*

Health professional mobility and the Global Code of Practice: evidence from joint EUROSTAT/OECD/WHO survey data

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This study assesses the impact and continuing relevance of the Global Code of Practice on the International Recruitment of Health Personnel in the WHO Europe region by analysing trends over time in intra- and inter-regional health worker mobility.

Methods: Data from the joint EUROSTAT/OECD/WHO questionnaire are analysed to determine 1) the proportion of foreign-born and foreign-trained doctors and nurses working in WHO Europe Member States, 2) trends in health workforce mobility over time by country of origin and destination, and 3) how the Global Code has impacted mobility patterns.

Results: The size of the foreign-trained health workforce in Europe varies widely, with foreign-trained doctors comprising over a quarter of the workforce in Norway, Switzerland and the UK, but below 2% in Estonia and Serbia. While annual in-flows across the region have been stable since 2009, the share of foreign-trained doctors and nurses have both increased by over 30%. Mobility between The Commonwealth of Independent States has remained steady, but an increase in East-West and South-North migration is observed, driven by European Union expansion in 2004 and the economic crisis. Migration of health workers into Europe from developing countries covered by the Code has fluctuated, with increased numbers seen from some origin countries (e.g. Nigeria, Pakistan). Some Western countries remain reliant on a foreign-trained health workforce. This contributes to a high outward flow of health professionals from other European countries and creates challenges for sustainable workforce development.

Conclusion: The Global Code remains highly relevant, but other factors have more impact on migration flows, such as free movement in the EU. Health workforce mobility data can be improved to support a 'whole of workforce' approach to policy and planning by including more professional groups, and by adding qualitative indicators, e.g. on individual perceptions and intention to leave.

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The mobile nursing workforce from Portugal to the NHS in England: different expectations of systems, organisations and the individual professional

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In England, staffing problems and a series of policy changes led many organisations since 2010 to become more active in recruiting nurses in EU/EEA countries to fill vacant posts. However, data since the 2016 indicate that these countries are no longer a reliable source of nurse supply. Limited empirical research is available on the experiences of these foreign nurses in the NHS and of the organisations that employ them. This study aimed to examine how the behaviours, practices and expectations of systems, organisations and the individual professional interact to influence the EU/EEA nurse mobility experience. This was explored in the context of the mobility of Portuguese nurses to England.

Methods: This paper provides the findings of the qualitative analysis of a mixed method study on Portuguese nurses in England. 27 semi-structures interviews were conducted at the individual, organisational and policy levels, analysed through the framework approach.

Findings: The study identified a mobility pathway for both nurses and organisations. It denoted the changing nature of mobility and the importance of the employer-employee relationship. The study also showed that although organisations recognised EU nurses' contribution beyond the filling of vacancies, these nurses' decision whether to stay or return home is part of an on-going assessment of the personal and professional costs/benefits of their move. Appropriate assistance and support avoids the employing organisation to be immersed in a constant cycle of recruitment and turnover.

Conclusions: Findings indicate a need for a coordinated and evidence-based workforce planning strategy that considers the needs and voices of those in the frontline of care, including those of the employing organisations. A better understanding of the mobility pathway can help identifying strategies to best capitalise upon these nurses' contribution and experience, ultimately helping to address the sustainability of the NHS.

The study suggests a dynamic and integrative method of analysing mobility, acknowledging its multilevel and complex nature and considering the needs and voices of those in the frontline of care.

Findings indicate the need for a coordinated and evidence-based workforce planning strategy, targeted at a sustainable system that can adapt to external, internal and unplanned pressures.

A human side of migration: Serbian doctors and nurses

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In the 21st century, the mobility of health care staff almost reached the same level of public attention as population migration. While migration patterns are thought to be manageable to some extent, human reasons for migration will always exist. It is of utmost interest to understand migration trends and patterns to prepare for or create a new future, especially for healthcare planners and visionaries. By using a case of Serbia, this paper reflects what is already known about the migration of healthcare staff and how this knowledge might be useful.

Methods: Review of the literature 2006-2018 on mobility of healthcare staff in the Republic of Serbia, especially migration among physicians and nurses, including the reasons, types of institutions (324 institutions), regions (Central Serbia, Vojvodina, Kosovo and Metohija and Belgrade) and activities undertaken by stakeholders.

Results: In 2015-2018, less than one third of approximately 60,000 health workers in public institutions would not change their job which is far less than it was in 2006 -2008 (more than 50% of respondents), and in 2009-2014 (more than 30%). In 2015, 15%, while in 2018, 17.2% of respondents would go to work abroad. Potential levers are mostly nurses, health associates, and physicians, from hospital sector. Major reasons for emigration are due to poor management and working conditions. Health professionals indicate necessary changes in respect to improving salaries and incentives, workforce availability and distribution, personal and work equipment, administrative workload, organization and interpersonal relations. They also do not see their commenting useful.

Conclusion: Emigration intention among health personnel is rising in the Republic of Serbia. Although measures to retain workers are noticeably in focus for health stakeholders, the majority of health professionals in public health institutions are still neutral with respect to job satisfaction over the last ten years.

Emigration intention among health personnel is rising in the Republic of Serbia.

Strengthening health workforce management capacity is needed in the public health care sector.

Transnational workforce mobility in long-term care in Europe: a framework for cross-country comparative analysis

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Many countries have expanded LTC services to respond to growing demand for elderly care. However, there is an overall lack of LTC workforce planning and development both nationally and in Europe. Failure to create a sustainable LTC workforce has resulted in a situation where transnationally mobile carers are filling the gaps. This comparative study introduces a conceptual framework to explore the connections between health labour markets, health policy and migrant care workers in Europe. The aim is to highlight governance gaps and the need for new transnational governance models.

Methods: The conceptual framework combines public health and transsectoral governance approaches and comprises four major dimensions: LTC system (finance, formal-informal sector), health labour market (supply-demand, education in LTC), labour market migration policies relevant for LTC, and the role of populist parties. Austria, Denmark, Germany, Italy and Poland were selected as country cases which represent different conditions in the LTC sectors of EU Member States. The analysis draws on a rapid review of the literature, public statistics and document analysis.

Results: Failure to adequately include carers in health workforce planning and policy has created a situation, where migrant care workers are recruited to fill in the gaps in EU countries. A comparative analysis reveals new emergent workforce flows, that do no longer fit a typology of sending and receiving countries. Moreover, new hybrid formations of mobile care workers can be observed, who flexibly move between countries following complex market dynamics and ad-hoc migration policy incentives.

Conclusions: Mobile carers are highly vulnerable to national interests, including growing populism. LTC reforms, which strengthen public responsibility and the formal LTC sector against cash-benefits and family responsibility might reduce nationalism in health workforce governance.

New transnational mobility patterns make carers highly vulnerable to market dynamics.

There is an urgent need for transnational workforce governance in LTC to mitigate inequality and respond to the needs of carers.

The mobility transition in health professional emigration

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Introduction: Human resources for health (HRH) emigration is a topic of great concern to policymakers. In what is called the "mobility transition", emigration rates for the general population follow an inverted U-shaped curve, with migration rising at a positive relationship to GDP/capita until source countries reach a GDP/capita of $7,000 or more, after which emigration rates fall. It is unclear whether HRH emigration trends follow a similar pattern.

Methods: We drew OECD-destination physician and nurse emigration data from the OECD.Stat database from 2000-2016 and charted it against real GDP/capita (2011 $ international). We censored data from small island states and country-years with known coups or conflicts. We fit a mixed-effects model testing for a quadratic (U-shaped) relationship between the natural log of GDP/capita and annual emigration flows, controlled for source country physician/nurse density and year.

Results: We drew data from 145 sending countries and 28 destination countries over 17 years. Scatter and fitted trend plots showed a regular, not inverted, U-shaped distribution of physician/nurse emigration rates, with low-income countries represented on the left end of the curve (with declining emigration with increasing GDP/capita) and high income, European nations represented on the rightmost end (with rising emigration with increasing GDP/capita) after an inflection point around $7,000 GDP/capita. Model estimates demonstrated a significant positive quadratic relationship between the natural log of GDP/capita and physician ($p=0.005$) but not nurse emigration rates when controlled for other variables.

Conclusion: There appears to be a mobility transition in HRH emigration rates, with an increase in HRH emigration with rising GDP/capita in countries with greater than $7,000 GDP/capita. Of note, some European nations have emigration rates of similar magnitude to low-income African nations, likely due to relatively relaxed EU mobility regulations.

Physician emigration Trends follow a U shaped transition with elevated rates in low and high income countries and depressed rates in middle income countries.

Some European nations have emigration rates similar to low-income African/Asian countries.

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