High-level Commission on Health Employment and Economic Growth

Submissions received towards the online Call for Contributions (online) - Round 1
Submissions received: 4 March – 11 April 2016
Introduction

The High-Level Commission on Health Employment and Economic Growth was established by Ban Ki-Moon, the United Nations Secretary-General (UNSG) on 2 March 2016. The Commission is charged with proposing actions to redress these inequities, and stimulate and guide the creation of health and social sector jobs for inclusive economic growth. These actions will harness the opportunity presented by the anticipated growth in employment to achieve improved health, global health security and the creation of decent work, particularly for women and youth.

The Commission is chaired by H.E. President of France, Mr François Hollande, and H.E. President of South Africa, Mr Jacob Zuma; and co-chaired by Dr Margaret Chan, Director-General of the World Health Organization, Mr Ángel Gurría, Secretary-General of the Organisation for Economic Co-operation and Development and Mr Guy Ryder, Director-General of the International Labour Organization. The 19 Commissioners appointed by the UNSG represent policy and technical expertise from the education, employment, health and foreign affairs sectors of government, as well as representation from international organizations, academia, health-care professional associations, civil society and trade unions.

The traditional investment case in the health sector is the connection between health and increased wealth. Whilst this has been instrumental to progress, it has not sufficiently addressed the value of employment in the health sector and the type and scale of multi-sectoral actions required for a fit-for-purpose health workforce to provide universal health coverage. Investing in health employment has the potential to yield a triple return for economies, health and women. The Commission will examine ways in which investing in health employment yields broader socio-economic dividends.

Call for contributions

The Expert Group of the Commission on Health Employment and Economic Growth issued an online public call for contributions to build the evidence base; strengthen policy dialogue across multiple sectors; and catalyze actions to guide the creation of new jobs and investment in health and social sector employment. Contributions were sought from all sectors, including health, social protection, education, economics, labour, gender, and human rights. A total of 132 submissions were received in response to the first round between 4 March – 11 April 2016.

Contributors could submit up to five submissions, and could submit (1) summaries of evidence, (2) case studies or stories, and (3) opinion pieces or essays. Submissions of up to 750 words were accepted and were received in English and French.

This document presents the submissions as received, without editorial revisions, in the order in which they were received for contributors that provided permission to publish and lists all the contributing authors.

Disclaimer: Contributors who have submitted comments via this call have given consent to WHO to publish their submissions, however, these documents are not official documents of the Commission, but rather an inputs that were considered during its development.
Questions asked

Q1. What are the conditions needed for investment in employment in the health and social sector to achieve Universal Health Coverage and produce inclusive economic growth, particularly for women and youth?

Q2. What are innovative ways of effectively and efficiently financing health workforce investments towards achieving the Sustainable Development Goals?

Q3. What are the social and economic returns on investments into health employment and what are the opportunities to maximize these? How could these returns on investment be measured?

Q4. What are the social and economic costs of inaction in the health and social sector labour market?

Q5. What are the risks and impacts of imbalances and inequitable distribution of health workers and how can these be mitigated?

Q6. How can we ensure gender sensitive policies that enable women and girls opportunities to enter the health and social sector workforce? How do we engage women to engage in decision making related to structural inequalities they face in employment?

Q7. What are innovative ways of optimizing benefits and reducing harms arising from international mobility of health workers?

Q8. How can education and training models be transformed to build a fit for purpose health workforce?

Q9. What types of multi-sectoral responses have worked and why? What multi-sectoral actions can be taken to enhance commitment for coherent workforce planning, development, employment, protection and security?

Q10. What institutional reforms are needed to strengthen governance for the health and social sector labour market?

Q11. How can political commitment from governments and key partners be generated to support implementation of the Commission’s recommendations?

Q12. What elements should be considered in a monitoring and accountability framework for the implementation of the Commission’s recommendations?

Q13. What are the potential impacts and implications of advancements in technology in health on the health workforce by 2030? How could these be anticipated and leveraged to maximize returns on health and social workforce investments in the 4th industrial revolution?
National Economy, Health Care and Health Personnel seems to be thought axiomatic that apart from being an element of a nation’s economy, health care also indirectly enhances it, and this enhancement depends in part, on the availability of appropriate health personnel. In the current debate, this purported economic gain is believed to impart a value to public health, hence, to the importance of an adequate access to health personnel. However, it is difficult to sustain this supposition for several reasons. In this submission, I shall point out its flaws, and propose a more tenable line of reasoning to attribute a high value to adequate health care. I shall begin by outlining my basic assumptions, on which there is general agreement.

**Basic Assumptions:**

Good health is valued by every individual because of the pain, discomfort or dysfunction that accompanies ill health. Thus, the sense of well-being good health gives us makes it valuable. The possibility of leading a life of adequate quality, depends on our ability to satisfy certain needs common to all. The possibility of our satisfying them depends on our having the ability and skill required to do so. This ability and skill are not givens, but they have to be acquired by learning, i.e., education in its inclusive sense. Economy represents our endeavours to satisfy our actual or assumed needs and the degree of our success therein. This success depends in part, on our ability and skill to satisfy those needs. Problems with the Current View: First, having the ability and skill to satisfy one’s needs is a necessary, but not a sufficient condition for doing so. Their possession does not entail one’s willingness to undertake appropriate actions to meet one’s needs, hence, the influence of education on economy is conjectural rather than factual. Moreover, it is difficult to see how may one justifiably establish a one to one correspondence between ill health and an impaired capacity to acquire the ability and skill required to meet one’s needs. The same objection applies to the belief that ill health will hinder one from using the already acquired ability and skill in every case. Hence, it does not seem justifiable to value good health owing to its possible contribution to economy, for it does not rest on sound epistemological grounds. Moreover, only a comparatively small number are unemployed due to ill health, while the majority endure it due to the vagaries of economy itself.

**Suggestion:** Ill health becomes generally undesirable, because of the pain, discomfort or physical incapacity it may entail to a person. Irrespective of its economy, a nation is but a collection of people. It is generally acknowledged that they are entitled to decide how their country is governed. Therefore, the people of a democratic country may justifiably require their government to deal with a country’s existing burden of disease, and to undertake legitimate steps to prevent instances of ill health deemed medically important. Other things being equal, a government’s ability to do so, depends on the adequacy of its access to appropriate health personnel. This justification of the importance of an adequate access to suitable health
personnel is based on the individual’s desire for personal well-being, which in a democracy, one may attempt to achieve by exercising one’s political rights. Thus, an adequate access to health personnel becomes a social good in a democracy. It follows from thence that development endeavours that embody promotion of democracy ought to include active steps not only to improve national economy, but also access to health personnel as an integral component of it. Once we agree on this suggestion of a value shift, we may supplement it with the addition of a possible limited economic value to the national access to health personnel owing to the part a health system may play in a national economy. Lal Manavado.

References
None cited.
| Contribution | Workforce Development for all countries to have Community Based Health Centers. Local input and control of local and federal funds are the keystone of a successful Community Health Center. Each Community around the world has different and varying needs. The small the area that is served the greater impact that Community Health Center will have on Prevention and Treatment of Disease in that Community. Basic Structure of Local Control: 1. Local Needs Assessments. 2. Local Boards of Directors with greater than 50% of each Board being users of the Community Health Center 3. Boards of Directors choose leadership locally. 4. Boards of Directors are Volunteer. 5. Boards of Directors have same cultural and demographics of the communities they serve. Fund is provided federally but controlled locally. Federal Agencies (Ministries) have input and expertise to help Communities, however the Local Board of Directors make final decisions. Benefits: 1. Each community knows what is best for local needs 2. Local hiring creates a local workforce that improves communities. 3. Decrease in disease burden in communities served 4. Enhanced medical outcomes 5. Enhanced community outcomes. Thank you for the opportunity to participate. Edward Hendrikson PhD, PA-C Associate Professor; University of Colorado, Denver Colorado Medical Officer: Manzini Youth Care, Swaziland Africa Consultant: NGO/PCB Board of UNAIDS, Geneva Switzerland |

| References | The National Association of Community Health Centers and George Washington University have studied and documented this of over 30 years. The evidence is overwhelming for local control of health care issues. For more information please search www.nachc.com |
Advances in health professions education are currently fast paced. Decades back this avenue was fairly stand still. Yet there has now been huge interest in the field across the domains of teaching, learning and assessment. Significant areas of recommendation are focus of the WHO in order to help standardise processes on a global scale. These include faculty development, curricula design, use of simulation, accreditation aspects and interprofessional education to name but a few. Often medical education reform as we currently see it today is based on Western innovation which generally snowballs globally. However, we know that typically the evidence for and against certain innovations is based typically on consensus with very few studies demonstrating long term gains. I also wonder whether more focus should turn towards the effects of culture on pedagogy. Economic shifts are currently notable with the well documented decline of Europe and rise of Asia. In Singapore, for example, several merger schools exist including the LKC School of Medicine (comprising Imperial and NTU) and Duke NUS. In China, the Ottawa Shanghai Joint School of Medicine has been established. And in the Middle East there exists the Weill Cornell Medical College in Qatar and the Harvard Medical School Center for Global Health Delivery in Dubai. As a result, there has been a shift of educators from West to East. From a cultural perspective, the literature highlights the important concepts of individualism and collectivism (Wursten H et al, 2013). The former is typically a Western based approach focusing on students speaking out, large group discussion, ease of confrontation in learning being made more open, and impartial teacher input. The collectivist culture which is typically Eastern, highlights students only speaking out when called upon to do so, small group interaction and a desire for no loss of face (Wursten H et al, 2013). Power distance on teaching has also been documented (Wursten H et al, 2013). In certain parts of Asia, there is a premium on order, with teacher initiated discussions and minimal criticism. The overall effectiveness of learning is felt to be due to a function of teacher excellence. In the West power distance is much lower, with student initiation, student centred communication, and two-way communication encouraged. Uncertainty avoidance in the East is higher with a need for structured teaching and an expectation of teachers to have all the solutions. Taking this further educational practices in Finland and South Korea for example have been highlighted. In Finland, there is documented student centred education, two-way engagement, student initiative, and an interest in intellectual disagreement with the teacher. In South Korea, education is teacher centred, teacher initiated, with the assumption of disloyalty on the basis of intellectual disagreement. (Wursten H et al, 2013). Schumacher et al highlighted that in order to develop the master learner one should focus on the aspect of autonomy for example where teachers encourage learners’ plans to prevail even if they contrast
to that of the teacher (2013). Furthermore, Rudolph et al in their paper on debriefing highlight the advantages of debriefing with good judgement and the encouragement of a two-way interaction between teacher and learner (2006). It is important to note that these aspects may not be best suited in non-Western settings. Not only is there an educator shift globally there has also been for decades a shift of students from East to West. Therefore, we must be mindful of these occurrences and ensure that medical education approaches take these factors into account. Only then can true rigour be achieved.

References

http://geerthofstede.com/tl_files/images/site/social/Culture%20and%20edu...


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<tr>
<th><strong>Submission 4</strong></th>
<th><strong>Inge Kaul, Adjunct Professor</strong></th>
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<tbody>
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<td><strong>Organization</strong></td>
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<td><strong>Contribution</strong></td>
<td>High-Level Commission on Health Employment and Growth Proposal for Challenges to Consider Moving Towards a Globally Harmonized and Enabling Regime on International Migration Submission by Inge Kaul. The issue International migration of health-service providers is likely to increase in the future. The driving forces will be that: (1) The supply and demand for health services will continue to vary geographically, with the effective supply for health-related services being relatively high in the less-developed countries and the effective demand relatively high in the more advanced countries. And (2), as the industrial revolution 4.0 advances, countries are likely to restructure their economy and to accord added attention to the development of service sectors, including health-related ones. Thus, international migration of all types of labor, including that of health-service providers must be expected; and forward-looking policy measures should be adopted as a matter of urgency in order to ensure that these migration movements can be undertaken in an orderly and fair manner. In particular, such movements should: (1) Result from an informed and voluntary choice of the migrating individuals; (2) Be supported and guided by an international regime, including information on the comparability of educational degrees and other professional certificates; (3) Do not imply negative consequences for the migrants’ home country; ando Benefit from a ranking of host countries in terms of the socio-cultural and economic conditions they offer to expatriate members of their workforce in the short-, medium- and longer-term. Ideally, the migration of labor to where the demand exists should be compared to the effective demand moving to where the effective health-related labor supply exists. Action that the Commission might wish to take: Recommend that ILO take the lead to establish a multi-disciplinary working group to examine the issues raised in this note and hold worldwide consultations on what the various concerned -- public and private -- interested parties view as constituting an enabling and fair international regime on international migration.</td>
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<td><strong>References</strong></td>
<td>Rich literatures exist on the issues addressed in the proposed study proposal, including on the internationalization of the labor markets; the ongoing industrial, technological revolution, and the problems that international migrants face at present.</td>
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Submission 5
Name-Position  Neel Sharma, Doctor
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Organization Type  Academia
Country  Singapore
Contribution Type  Opinion
Question Answered  13

There has certainly been a ubiquitous rise in the use of technology. Our daily lives centre on accessing the World Wide Web (WWW), social media and instant messaging. And it is clear that this movement is here to stay. Such technology has even made its way into health professions education. Many institutions in the West for example encourage the use of the WWW during class (eg PBL) in order to access in depth evidence based information and later engage with peers or faculty in discussion forums. There has been a move away from didactic passive learning to more active methods with teachers no longer being expected to teach but rather facilitate a class. Avoidance of pure theoretical knowledge is recommended with more drive towards application. Of course this makes sense as the essence of any practicing health professional is to engage with people with real life health concerns, and often a multitude of such. Additional technology based avenues include high fidelity simulation. Here learners are able to undertake acute based scenarios in a safe learning environment with the provision of real time feedback. However, despite the movement towards high fidelity simulation, it is important to note that it is not without cost. The AAMC report Medical Simulation in Medical Education: Results of an AAMC Survey 2011 noted that 22% of medical schools and 57% of teaching hospitals had an annual operating budget of up to $250,000 for simulation, with 15% of medical schools and 11% of teaching hospitals serving an annual budget of between $1-2 million plus. Costs of course are based not just on technology but faculty, facilities and administration to name but a few. Staggering expenses by any means. Hence if technology is employed in health professions education, it must be cost effective and still ensure adequate learning gains. Therefore, I envisage two forms of tech enhanced learning which enable this focused on the flipped classroom movement and MOOCS. Flipped learning is slowly taking shape in the education setting. Here learners are provided knowledge based materials prior to a class session, with class time spent engaging with real life problems and issues. The bonus is on peer to peer/ peer to faculty engagement with faculty acting as a guide on the side rather than a sage on the stage. Learning materials are typically video or audio based in nature. And with distribution platforms such as YouTube, dissemination is quick and effective. Furthermore, as the repository of learning materials builds, there is no added pressure on faculty to create new content but rather simply utilise/ adapt existing material. The flipped learning concept was cemented following the success of the Khan Academy. And is seeing positive results in health professions education. Massive Open Online courses or MOOCs are another movement which will also gain momentum. They are in essence online courses available free of charge on a global scale with the provision of lectures and subsequent assignments. Discussion forums exist to engage learners with each other and faculty. Potential benefits have been highlighted and include
added learner convenience with the ability to learn anytime anywhere, data analytics and global engagement. Such data gains can help faculty better understand their learners and develop more personalised content to focus on areas they are less competent in. This has particular value as it is well documented that learners gain competency at different rates. MOOCs are endorsed by reputable universities such as Harvard and Stanford. Often such institutions are associated with excessive fees. However, MOOCs provide accreditation from experts at these centres at no additional cost ensuring that individuals who are unable to afford such expenses can still benefit from a world class education. Technology enhanced learning is certainly a continued vision. Learners of today and of tomorrow across many nations are in essence digital natives. Hence they feel at one with technology. Of course we must be weary of unnecessary expense. Whilst high fidelity simulation may be a concern in terms of cost, cheaper and still equally effective ways of learning are available. The WWW is becoming more accessible with internet cafes and coffee shops offering such services through minimum charge or via freely available Wi Fi. Hence utilisation of this platform for flipped classes and MOOCs can be a convenient option for health professionals whilst still ensuring the facets of learning theory are met, namely self-directed learning, active learning, convenience based learning, autonomy, reflection, engagement with peers and faculty as well as real time feedback via discussion forum interactions and assessments.

References
AAMC.
### Submission 6

<table>
<thead>
<tr>
<th>Name/Position</th>
<th>Hazel Carter Strachan, Doctoral Graduate</th>
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<tr>
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**Contribution**

How can education and training models be transformed to build a fit for purpose health workforce? The unit of analysis for measuring learning when using education and training models has traditionally been the human cognition situated in a learning environment. Education and training are not ends in themselves but catalysts for skills development that can lead to a fit for purpose health workforce. These models have conventionally ignored social learning and the learner situated in a community of practice (CoP) or an activity system and this aspect of learning has serious implications for the development of a fit for purpose health workforce. A fit for purpose health workforce can be realized through the development of both ‘competencies and regulatory frameworks needed to deliver quality care in accordance with the burden of disease and health priorities.’(Campbell 2013 p.886) This paper argues that it would be difficult to develop competencies and regulatory frameworks through assessing human cognition alone. Skills development depends on social interaction where medical professionals engage in CoPs and activity systems while at university, within training, and moreover in the workplace. Education and training models need to be transformed to accommodate the differing sites for learning. The workplace as a site for learning also needs to be transformed and this paper will focus on integrated sites for learning and skills formation towards a fit for purpose health workforce. Both the standard and emerging paradigms of learning must be reviewed in developing a model or models for the effective development of a fit for purpose health workforce. The standard paradigm embraces learning within the formal education system with an epistemological belief that knowledge is something to be acquired, and this acquired knowledge exists independently of the knower (Sfard, 1998, p.5 in Lee, et al 2004 p.7). The standard paradigm is normally purported by cognitive and behaviorist psychology and the unit of analysis is usually the human cognition. The emerging paradigm purported by Hager (2004) focuses on the social learning perspective. Learning is participation rather than acquisition. The emerging paradigm embraces the lens of social learning theory (Lee et al 2004). The emerging paradigm also encapsulates learning as transformation which is the crux of achieving a fit for purpose health workforce. Transformative learning ensues within activity systems purported by Engestrom (2001) and the transformative potential unlocked in the workplace when health workers engage in learning within the structure of activity systems. In seeking to identify solutions for low quality human capital development in health, researchers continue to look toward the standard paradigm for answers. University and training institutions are not the only sites for learning and there must be a focus on the impact of the emerging paradigm and the issue of workplace learning and skills formation. Working and learning are inextricably linked, there is an interconnectedness between learning and work, with learning
processes and learners effectively organized, and structured in achieving high performance outcomes (Stern & Sommerlad 1999). Lave and Wenger purport an inextricable link between learning and working that functions within the structure of a CoP. According to Lave (1993), there is no separation between these two entities. Formal learning results in theoretical and methodological knowledge, practical skills and techniques, generic skills, and general knowledge about occupations (Eraut 2004). However, it is through informal learning that novices become experts, and key skills that cannot be formed during the classroom or within the walls of academia can be developed. The health care system in seeking to embrace a fit for purpose regimen must consider the importance of workplace learning and skills formation among medical professionals as the engage in CoPs and activity systems that promote learning that is participatory and transformational.

References
The Human Rights Aspect of an Adequate Access to Health Personnel

Even though there is a long way to go, much has been said about the importance of observing human rights in practice. The 2030-agenda seems to offer a means of taking a few more steps in the desired direction provided that the decision-makers are willing to do so. My point of departure is that the observation of human rights is desirable, because it is the sole reasonable way of ensuring security from undesirable actions undertaken by other people. Here, I use the term security in its widest sense so that includes being safe from crime, discrimination, insult, armed conflict, etc. Security is highly desirable, because it is one of the necessary conditions for our being able to adequately satisfy our other fundamental needs. The possibility of our living depends on the possibility of satisfying our fundamental needs. Thus, ensuring security becomes a fundamental need. Our other fundamental needs are education in its broadest sense, nutrition, health, procreation and what I have termed a set of non-material needs like aesthetic enjoyment, sports, etc. The last two of those are respectively concerned with perpetuation of the species, and enhancing the quality of life. A brief reflexion would be sufficient to show one that an adequate satisfaction of any one of the first four needs viz., education, nutrition, health and security is essential for us to be in a position to satisfy the remaining five fundamental needs. So, unless our health need is adequately satisfied, the possibility of an individual satisfying one’s other fundamental needs will be reduced in proportion to the acuteness of the health problem encountered. When this inability to meet our general health need becomes wide-spread, its collective impact on a nation would be obvious. One of these is a nation’s loss of confidence in the value of observing human rights, especially if it perceives it rising burden of disease as a consequence of other nation’s failure to respect its need to satisfy its own health need. Other things being equal, human rights have no meaning in real life, unless their observation is essential for the successful satisfaction of one’s fundamental needs. Meanwhile, the possibility of satisfying a nation’s health need, depends on its having an adequate access to appropriately qualified health personnel. So, ensuring such an access represents an observation of a human right, while limiting that access constitutes a failure to respect it. A justifiable function of a government therefore, is to enable the people satisfy their health need, which implies that it ought to ensure an adequate access of appropriate health personnel to its health service. Here, it is possible to distinguish between two distinct means of doing so. The first embodies a real respect for human rights of everyone, i.e., it is global in scope. In the second, respect for this particular human rights component may be just national or regional, because it respectively entails a global or a regional disregard for it. A health personnel policy that embodies a universal respect for people’s right to adequate health care will strive to meet
locally the demand for health personnel by encouraging people to enter health professions, establishment of adequate training facilities and health care provision units, and providing mechanisms to enable health personnel to improve their quality of life. Nations interested in promoting human rights could assist a country to achieve the above objective by providing appropriate help required for the purpose, and by refraining from undertaking actions that would reduce its access to health personnel. It should not be forgotten that less affluent countries spend a good deal of their scanty resources to train their health personnel. We have now come to the crux of the matter. Is it possible to justify recruitment of health personnel from countries where they are badly needed? Here, we run into the age-old problem, is the right of a health worker to enhance his quality of life greater than that of his countrymen to improve their health a little? Let me emphasise that no government can escape the charge of not respecting an important human right if it does promote recruitment of health personnel from abroad if it results in their shortage in the lands of their origin. Nor does it escape the charge of disregarding an individual’s right to ‘same pay for same labour’ if it does not rigorously ensures this for foreign health workers. However, a legalistic approach to ensure respect for this human right will not be very productive. This is only to be expected, for it is reductive. Shortage of health personnel is a complex issue, where individual attitude and expectations play as an important role as political stability, rule of law, state of economy, educational standards, etc.

References

None cited.
Human resources for health – a new paradigm for educating for future demands
new medical technologies and new communication modes have lead to not
existing / recognized new areas of competence, alternative work structures and
unspecific job descriptions in health care. Complexity in delivery health care need
to be acknowledged and an unideological and fact-based approach to formal
training and education is required. Background: Health and health care is not
complicated, but complex. This means, that linear cause-effect relations do not
suffice in describing the system and reliable forecasting in not possible. [1]
Phenomena like demographic change, migration, technological developments,
and globalization by digitalisation and connectivity lead to an exponential growth
of knowledge, multicausality and simultaneous developments into different
direction. More freedom and more options are available, but also more stress is
produced due to uncertainty, discontinuity and non-predictability. Teleological
thinking is replaced by acknowledging the fact that changes are not for the better
or worse, they are just the way they are. Health care used to be delivered by
doctors and nurses, some allied health professionals and a few experts from the
non-medical field. Today, health care provided by doctors and nurses, requires
the input from IT specialists, economists and actuaries, designers, sport coaches,
food advisors, psychologists, data security advisors, ... - the list goes on. How to
deal with the demands for such new staff for integrated and efficient health care?
Based on Thomas Kuhn’s classical work on “The structure of scientific
revolutions“, [2] we argue that the paradigm (in the sense of a “worldview
underlying the theories and methodology of a particular scientific subject”, New
Oxford American Dictionary) underlying education and training in health care is
currently changing. Forecasting, weak signal and developing new curricula. A
number of new fields are emerging and particularly the use of “big data”will
massively affect the way medicine is delivered. Hence, hybrid functions will
emerge and specialists with a cross-cutting knowledge will be required. Innovative
forms of prothesis are developed by experts combining neurobiology, mechanical
engineering and computer sciences. As the number of elderly people wanting to
live on their own in their houses rises, there is a need for specialists to plan and
install ambient assisted living (AAL) – some new job description of a “sensing
specialist in health” may be required. In order to improve adherence to therapy in
chronic conditions, improve motivation and link medical therapy to
supplementary approaches via changes in diet and exercise, some form of
“medical care motivators“might be necessary. Already existing forms of
delegation and / or substitution of physicians’ tasks to nurses are taking place and might be substantially expanded once reliable algorithm-based clinical tools are available. [3] Each of those new jobs described here will require education and training which currently is not fully developed or not available at all. Graduates of new courses will need to know what to do with their qualification and thus providers and financing institutions will need to thinking about the required expertise as well. The way forward questions and uncertainties remain. Each health care system provides work and income for a large group of people, and particularly doctors are often socially very powerful. Resistance to change is inevitable. Such resistance can be useful, forcing to reflect and balance conflicting interests, but resistance of well-organized groups and the wish to retain special privileges is often dysfunctional. We suggest a five-step approach: (i) get the facts just as facts, (ii) reflect on the prevailing norms and behaviours, (iii) stimulate creativity, (iv) identify functional demands and scenarios and (v) generate solutions. Similar suggestions have been made elsewhere, [4] but to our knowledge the needs of specific education and training has not been brought up on this context. The results of such an approach might serve as an orientation and basis for acting. Flexibility needs to be in-build, finality cannot be achieved any more, but permanent adjustments of methods, contents, and objective require proably new forms of formal qualification too.

References

Investing in the health workforce in developing countries

The global environment has changed with technological advancement in all sectors. This relates to the need for embracing these changes for sustained growth. Sustained economic growth is dependent on labor force with minimum levels of education and health. The European observatory on health systems and policies notes that healthcare is labour intensive and the heart of health systems are health care workers (Rechel et al. 2009). However health systems struggle with achieving the right skill mix, numbers and distribution of healthcare workforce. In a study on high nurse turnover in mission hospitals in Kenya, the reasons for turnover were poor salaries and allowances commensurate with qualifications, unclear scheme of service lack of management support, training/sponsorship opportunities for staff development (Bogonko & Kathure 2015). To address these glaring gaps in developing countries there are a number of considerations:

Implementing the 5’s in the health care system: In Kenya implementation of the 5’s in selected mission hospitals has led to establishment of a quality assurance office, identification of system issues related to work environment and patient care. Implementation of the 5’s in health care has been known to promote continuous improvement through team problem solving and minimize wastage (Young et al. 2014).

Use of the Balance Score Card: The balance score card is a management system that enables organizations to translate vision and strategy into action. Health systems in developing countries still focus on financial performance and can benefit from the balance score card to measure performance. The balance score card focuses on four different perspectives: financial, customer, internal and learning perspective. Though noted as difficult to implement, its long term benefit is helping organizations turn strategy to action (Išoraite 2008). As noted in the above reasons for staff turnover in Kenya, this will address the internal and learning perspective of the health care system.

Public Private Partnerships: The private sector has become increasingly an important source of healthcare filling the gaps left by the public sector. Studies in Sub-Saharan Africa show a preference for private hospitals because of the skills of provider and large supply of health care personnel. In Uganda patients preferred private practitioners because of the perceived high technical skills of the personnel (Konde-lule et al. 2010). In Kenya, the private sector came together to form private sector alliance that actively engages the government in health. This partnership has seen both private and public sector health workers benefit from career development trainings. In conclusion, creating an enabling environment and linking health and wealth especially in developing countries will address gaps in health workforce.

References


| Submission 10                                                                 |
|---|---|
| **Name/Position** | Tabitha Rono, Pediatric, Adolescent and Youth Psychosocial Project Officer |
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| **Country** | Kenya |
| **Name** | Patrick Kyalo |
| **Organization** | Christian Health Association of Kenya |
| **Country** | Kenya |
| **Contribution** | Evidence |
| **Type** | Evidence |
| **Answered Question** | 1, 2, 3, 9, 12 |

**Addressing Health Workforce shortage: A Two Prong Approach**

Low-income settings face many health services input challenges whilst quality of care is influenced by utilization of health care services and access to effective treatment. Globally, much attention has been given to social actors seeking care but less on social actors delivering health services (Gross et al. 2012). This is could be linked to neglect in mobilization and strengthening of human resources for health that is important in addressing health crises. In Africa, there has been a rapid population growth with those living below poverty line reducing to below 45 percent in 2012. This has been associated to emerging middle class, reducing mortality rates faster than fertility rates (African Development Bank Group, 2014). This emerging middle class means that they will have greater expectation demanding for better health services and seek for more advanced healthcare. However this will be a challenge for a health workforce that is not up to date with technology and training.

The report by the European commission on health note that the health of a population impacts not only on level of income but distribution of this income between savings, consumption and willingness to undertake investment. A population with improved life expectancy will mean higher savings thus resulting in higher propensity to invest in physical and intellectual capital (Suhrcke et al. 2005) There is a two prong approach to addressing health workforce: Human Capital investment in the health sector: Investments in health workforce has been an area lagging in developing countries leading to brain drain. One of the reasons health managers in hospitals give is trying to reduce cost as they are not able to afford skilled health workforce. However in a study by Ernest and Young on cost optimization, they point out the need for cost reduction program to use pools of available cash to invest in people to aid growth and create positive effect for employees (Young 2011) and provide incentives. European countries have been known to depend on health workforce from abroad and this leads to rising labour costs and shortages in countries where these health work forces come from. In Kenya, the government has recognized majority of the health workforce providing care are nurses, clinical officers and other health cadres. Doctors have become expensive and unavailable and this calls for investing in the nurses, clinical officers and other health group cadres. The human capital theory states that an increase in a person’s standard of knowledge and health raises their productivity in both market and non-market activities. Investing in knowledge and health of the health workforce will translate to productivity in terms of reduced wastage and improved efficiency. Active
multisector partnership: One precondition for development is good health which is reliant on social, environmental, infrastructural and regulatory systems. There is a shift from curative to preventive care and this needs multisector interventions (African Development Bank Group 2014). In Kenya, community health volunteers belonging to a community unit have been instrumental in reaching many communities. Most are women with a smaller proportion being men but they have been able to form strong networks where they benefit from trainings from different sectors. These trainings empower them to invest and increase their income to complement the USD$20 government incentives. Sectors like Agriculture, Education, Security and Environment engage these established networks which are cost effective. Healthcare being filled with macroeconomic uncertainty requires policy makers in developing countries address current economic challenges. This translates to policy action focusing on employment generation, promoting productivity growth and investment (International Labour Organization 2013). Conclusion: For health workers money is not always a motivator but increased knowledge, working in an environment that is secure, being able to make decisions, having the right tools to work, receiving feedback and recognition. Investing in health workforce has positive returns on investment in economies of developing countries.

References
In January 2015, we conducted qualitative interviews in Bujumbura, Burundi, to probe women on how they talk about work and how they juggle work with childcare. The reason we conducted this qualitative work was in response to a quantitative pilot we had undertaken in August 2014 with poor response rates and inaccuracies to questions relating to work. Women were recruited by our local interviewer. At recruitment, women were assigned to a group according to their age and number of children. Groups had five to seven participants, or were one-on-one interviews. Forty women took part in 11 interviews/group sessions.

From the discussions I learnt that women were responsible for expenses relating to food, clothing and education, and the husbands generally took care of the housing costs. All of the women were in rented accommodation; two of the women did not live with their husbands. Below are a few excerpts from the interviews that relate to work and childcare. Work: Around half of the women we interviewed worked in some capacity, one was a public servant, one was a teacher, one worked in a factory, and others were engaged in market-trading. Household responsibilities were often viewed as work. Many women were unable to sustain their work or income stream in the face of shocks. Childcare: The women did not want childcare, they wanted flexibility to look after their own children. If you had more money, what would you do: Many women said they would buy their own house. Women were working, trading at market, engaged in entrepreneurial activity, and they also viewed their work at home looking after the house and the children as their work and contribution to society. Staying at home and looking after the children was the role of the mother, and giving up work and the financial reward of working was worth the sacrifice so that the child would grow up healthy, well-behaved and educated. Women could not rely on childcare or husbands to look after the children. While they could have a nanny or leave them with the husband, they knew this was done with the risk of the health and education of the child. Creating policies that enable women to enter the formal labor market may not be as simple as building up “quality child care”. It may not be in the interest of the mother, nor in her view of her role within society, to be away from her children. Enabling workplace flexibility (time off, employment protection, job-sharing), and capturing the entrepreneurial spirit of these women so they may build their own business that can be coupled with childcare, are directions more in-line with what women are aiming for. 6. How can we ensure gender sensitive policies that enable women and girls opportunities to
enter the health and social sector workforce? From the qualitative study conducted in Burundi, we learn that full time employment away from the home is not the goal of the women. The women need to remain primary caregivers of their children, small amounts of time away from their children seem to be manageable, but the separation from the mother that full time work implies is not what they want. The women opt for poverty over separation from their children. But the women do acknowledge that they need a small amount of money for food, clothing and education. But the work needs to be flexible. In reference to working in the health sector, where jobs do not combine easily with childcare as working in the market or running a home tailoring business would, flexibility needs to be in the form of job-sharing, part-time, and time-off without fear of job-loss. In the health sector, nurses, administrators, doctors, lab-technicians, etc. all require intense face-time with the patient and it would be impractical to think that the woman would bring her young children to work with her. Just like all children, there are days you can plan for (well-visits to the doctor), and days you cannot plan for (children get sick, child care is unreliable). Women need the support to balance their role as the primary care-giver and a worker, in a climate where childcare options are very limited.

References
The forgotten discipline: Human resources for health management and administration (HRH_MA) in Low-and Middle-Income countries

Managers and administrators in charge of health service provision and purchasing play a crucial role in harnessing the potential advantage of prudent purchasing of health services, supporting the attainment of health system objectives. With an increased role of independent institutions (both purchasers and providers) there is a strong case to be made for investing in capacity-building of managers and administrators in low- and middle-incomes countries. The ongoing debate about human resources for health primarily focusses on the availability of doctors and nurses (including birth attendants) [1,2]. These professional, indeed, play a key role in delivering quality health care, but they are embedded in, and thus dependent on a web of administrative and management practices. While most of management functions are similar to those in other industries, there are specifics in the health care sector which do not allow a simple application of experience and tools that proved effective elsewhere. Health care is usually an extremely regulated field: this applies to licensing physicians, accrediting hospitals, controlling for quality, governing financing and curtailing costs. The specific demands implied by such regulation add complexity to the management and administration practice in the health sector, requiring a particluar set of skills and competencies for professionals. With the rise of mandatory health insurance schemes, new expertise is in much demand: health service purchasing and administration. Health insurance schemes, if properly set up and managed, prudently purchase health care services on behalf of their members. In some countries, the combined functions of financing and delivering health care within the ministry of health has deliberately been split up in order to create an “internal market” which should resemble the idea of a purchaser and a provider of services. This explicit purchasing function (and not merely reimbursement of costs) is ideally based on a number of key competencies, amongst others, a good knowledge about the insured population, responsiveness to health needs and preferences, administration of the insured (registration, collecting contributions, information & advice, control of fraud and abuse), assessment of provider competencies (service quality and accreditation), negotiation with providers (on
volume, quality and cost of services) and monitoring and controlling results. Similarly, enhanced management and administration expertise is needed from the delivery side. Hospital and practice managers need to negotiate with purchasers, manage personnel with a high level of professional autonomy, introduce quality assurance measures while at the same time be well aware of the complex regulatory environment. Inke Mathauer and Emmanuelle Nicolle reviewed global health insurance administrative costs [3]. They found huge variations with (i) costs for administering private health insurance about three times higher than those for administering social health insurance, (ii) administrative costs in low- and middle-income countries much higher than in high-income countries and (iii) with considerable variations across and within countries over time. The authors rightly point out that “simple comparisons of shares of administrative costs are inadequate. There is thus need to look beyond aggregate numbers.” The findings imply that there is a wide variation in the role and work load of insurance schemes, a lack of standardized processes within the insurances’ administration as well as insufficient governance and management expertise. The need for professional management and administration has been recognized in developed countries; [4] a literature review identified seven major strategy areas potentially useful for improving performance among health care delivery organizations. [5] A detailed description of functional competencies and training needs for purchasing organizations has yet to be developed. We believe there is a strong case to be had for specific education and training in health management (for both purchasers and providers) in low- and middle-income countries. Health care management is a well-established discipline in developed countries with a wide range of training and research opportunities. In addition, mature systems like for example in Germany, have over time developed their own apprenticeship structures to train specialized administrators in various social insurance schemes (Sozialversicherungsfachwirt). These are government-recognized qualifications. Human resources in health for management and administration (HRA_MA) have often been neglected in the devate about HRH for achieving UHC. At present, in most low- and middle-income countries the training opportunities and regulated qualifications are very limited. In those settings, dedicated institutions and defined qualification pathways in the field of health care management and administration would be most helpful in achieving the goal of UHC, especially under severe resource limitations and with non-mature organizational structures.

References

The Queensland Nurses' Union (QNU) is the principal health union in Queensland, Australia, covering all categories of workers that make up the nursing workforce including Registered Nurses, Registered Midwives, Enrolled Nurses and Assistants in Nursing who are employed in the public, private and not-for-profit health sectors including aged care. Our more than 53,000 members work across a variety of settings and in a full range of classifications from entry-level trainees to senior management. The vast majority of nurses in Queensland are members of the QNU. This is a brief summary of the importance of nurse/midwife-to-patient ratios and our campaign to introduce legislation providing this workload model in the Queensland public sector. Nurses and midwives are a vital part of the health care system. Their work not only supports those with particular healthcare needs but also underpins the social structure in our communities [1]. Queensland nurses and midwives are registered under a national system, which consists of two divisions of regulated nurses, Division 1 Registered Nurses/Registered Midwives and Division 2 Enrolled Nurses. In 2016, following a targeted campaign by the QNU, a newly elected Queensland government introduced a bill into the parliament establishing minimum nurse/midwife-to-patient ratios in some sections of the public sector. Queensland follows the state of Victoria, California, and Wales [2] as the only jurisdictions to introduce ratios legislation. There are currently no laws governing how many patients can be safely allocated to a single nurse/midwife. The absence of such laws has resulted in nurses and midwives frequently experiencing unsafe workloads and expressing concerns for patient safety. The implementation of minimum ratios in Queensland public health facilities is distinct from other ratio models applied in Australia and around the world. Here, Queensland Health, the state government department responsible for providing public health care, will be implementing minimum ratios in conjunction with the industrially mandated and validated tool for managing nursing and midwifery workloads known as the Business Planning Framework (BPF). The BPF is a comprehensive planning process that customises the workloads of nurses and midwives to suit the individual circumstances of their clinical environment. It takes into account the ‘human factors’ that affect nursing and midwifery workloads beyond ratios. The combination of the BPF and minimum nurse/midwife-to-patient ratios will allow the number of patients allocated to a nurse/midwife to be adjusted above the stipulated ratio in accordance with variables such as patient activity and acuity. A substantial body of research [3] [4] [5] [6] [7] [8] clearly demonstrates that nurse-to-patient ratios...
and endorsed skill mix levels (the proportion of Registered Nurses providing care) are economically sound methods to save lives and improve patient outcomes. National and international studies have irrefutably shown that the number, skill mix and practice environment of nurses directly affect the safety and quality performance of health services. Health services with a higher percentage of Registered Nurses and increased nursing hours per patient will have lower patient mortality, reduced length of stay, improved quality of life and less adverse events such as failure to rescue, pressure injuries and infections. The following statistics give a snapshot of the important correlation between nursing/midwifery workloads and patient outcomes: (1) Every one patient added to a nurse’s workload increased the likelihood of an inpatient dying by 7% [3]. (2) Every 10% increase in bachelor-educated nurses decreased the likelihood of an inpatient dying by 7% [3]. (3) Every one patient added to a nurse’s workload increased a medically admitted child’s odds of readmission within 15-30 days by 11% and a surgically admitted child’s likelihood of readmission by 48% [6]. Nurse/midwife-to-patient ratios will contribute to organisational productivity, hospital efficiency and continuity of patient care by increasing staff satisfaction, decreasing attrition rates, reducing patient readmission and adverse events, limiting service variation and improving equality across the healthcare sectors. Legislated nurse/midwife-to-patient ratios are vital, as they will form the ‘floor’ in the delivery of safe, high quality nursing and midwifery while the BPF will be the mechanism for staff to reach above the ‘floor’ staffing levels to match the individual demand of their clinical service. The QNU anticipates the Queensland government’s direction to underpin the BPF with legislated ratios will alleviate many of the long-term workload and patient safety concerns held by nurses and midwives employed in HHS. The QNU welcomes the Queensland government’s commitment to legislate nurse/midwife-to-patient ratios as acknowledgement of the crucial role nurses and midwives play in delivering safe, high quality health care [9]. This investment in the nursing and midwifery workforce will pay long-term dividends for the population’s health. The outcomes will be assessed through an evaluation study.

References
Background: The James Cook University (JCU) medical school was established in Townsville, northern Australia in the year 2000 with a mission to select and educate medical graduates prepared to work in under-served parts of the region including rural and remote locations. The JCU medical school has now produced 1106 Bachelor of Medicine, Bachelor of Surgery (MBBS) degree graduates from 11 cohorts. To encourage graduates to work in rural and remote areas of northern Australia – an area of significant workforce shortage – the JCU medical school has used 3 key strategies: (1) A selection process open to applicants from all geographical locations across Australia, and based on a combination of academic performance adjusted for rurality of prior education together with a face-to-face interview focusing on self-reliance, communication skills, inter-personal skills and a genuine interest in rural, remote, Indigenous and tropical medicine (2) Training that includes early, repeated and extensive exposure (at least 20 weeks for all graduates) to rural and remote experiences across the six year undergraduate course (3) A decentralized medical education model, where approximately 60% of students move in years 4-6 to rural clinical school training sites across northern Australia (Cairns, Mackay and Darwin). JCU medical graduate outcomes across northern AustraliaThis combination of rural medical education strategies has been shown to be associated with markedly different patterns of practice for JCU graduates compared to those from other Australian medical schools, with JCU graduates much more likely to undertake internships and practice in rural and remote locations (see Figure 1), as well as choose Family Medicine/General Practice or Rural Generalist training specialization. The school’s graduate tracking program 6 has found 39% of the first 7 cohorts have undertaken training in Family Medicine and 17% in Rural Generalist Medicine training. Specifically, the School’s graduate outcome evaluations show rural and remote origin students are much more likely to practise in rural and remote areas as graduates. The prevalence odds ratios (POR) for graduates practising in a rural town in Post Graduate Year (PGY) 1 having either a rural or remote hometown were 2.6 and 1.8, respectively, compared to graduates having a metropolitan/inner regional hometown, while at PGY 9 the PORs had increased to 4.2 and 9.5, respectively. While some significant differences were noted between rural and remote origin students and
metropolitan or inner regional origin students in terms of academic achievement in the first 3 years of the course, and for length of time taken to complete the course, the rural and remote-origin students performed just as well as their peers in the year 4–6 assessments. The decentralized training model involving four non-metropolitan hospital training sites is also contributing to recruitment of interns in these local hospitals, and in subsequent years, retention within the wider regions. 7 Students attending the Townsville, Cairns, Mackay and Darwin Clinical Schools are much more likely to undertake internship there than other students (p<0.001; POR=7.1; p<0.001; POR=11.5; p<0.001; POR=19.4; and p<0.001; POR=85.7; respectively) as well as practising in the Townsville, Cairns and Mackay health service districts in PGY4-7 (p<0.001, POR=2.9; p<0.001, POR=3.8; and p=0.033, POR=3.6; respectively) 7. The JCU medical school is also producing a significant proportion - around 10% - of graduates who have practised for at least 1 year in a remote area during their early career (unpublished research). Graduate outcome evaluations show specific aspects of the selection process and curriculum were associated with this later remote practice: graduates with Aboriginal or Torres Strait Islander ancestry (p=0.006; POR=4.6), graduates awarded an ‘above average’ interview score at medical school selection (p=0.003; POR=5.6), and graduates who attended the Darwin clinical school in Years 5-6 (p<0.001; POR=5.0). ConclusionsThe workforce impact of the 11 cohorts of JCU medical graduates from JCU are starting to have an effect in northern Australia, which, if these trends continue, will continue to impact significantly on local workforce shortages over the following decades. Data collected by the School suggest that JCU’s selection process favouring rural origin and Aboriginal and Torres Strait Islander applicants does not compromise academic standards, but does produce graduates whose positive patterns of rural and remote practice accord with the mission of the school. In addition, the JCU medical school’s decentralized medical education model also appears to significantly promote recruitment and retention across northern Australia, including in districts of severe workforce shortage and/or geographically remote locations. This data adds further weight to the ‘rural pipeline’ approach based upon an integrated approach to recruitment, selection, curricular experiences, student support, appropriate staffing and teaching, and provision of postgraduate pathways to practice.

References

**Submission 15**

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**Organization**  
Northern Ontario School of Medicine

**Organization Type**  
Academia

**Country**  
Canada

**Contribution Type**  
Evidence

**Question Answered**  
8, 10, 12

### An Alternative International Standard: Achieving Universal Health Coverage through Socially Accountable Health Workforce Education

Regardless of a region’s or a country’s level of economic development, an important goal for the health care system is to address the health needs of the population it serves. These needs include the ability of people to access and receive quality health care services across the continuum of care delivered by skilled practitioners in a timely and cost-effective manner. This is the essence of true Universal Health Coverage, particularly for vulnerable and disadvantaged populations, such as individuals living in rural and remote areas in low and middle income countries (1). No developing country wishes to be seen as having substandard health workforce education. However, the current international standard is that graduates of medical and nursing programs acquire the skills and the potential to be employed in the teaching hospitals of North America or Europe. In fact, a medical or nursing degree is a passport out of the country. This situation exacerbates the disadvantage of low and middle income countries and highlights the need for an alternative international standard for health workforce education. This alternative standard should be premised on the social accountability of health workforce education to achieve greater health equity (2-4). The importance of student selection and admission strategies for the equitable representation of underserved populations in the health workforce and their impact on future practice cannot be overstated (5-7). Recruiting students from, and training them in, underserved areas fosters a desire to practice and provide long-term, sustainable services in these communities. Community perspectives within and outside the student body can help health schools to anticipate societal health needs in local contexts, to emphasize responsible governance, to adopt outcome-based education, and to recognize society as an important partner when making health policy and education decisions(8-9). Specifically, community perspectives help to ensure that the WHO’s health care principles of quality, equity, relevance, and effectiveness are met, and that health determinants are central to the strategic development of health workforce education programs and curricula(9-10). There is a growing body of evidence indicating that this model is effective. The Training for Health Equity network (THEnet) is an international community of practice led by 12 schools with social accountability mandates to address health inequities and local health priorities (11-13). For example, the Walter Sisulu Faculty of Health Sciences (WSU FHS) was established to address severe health professional shortages and meet care needs in rural, predominantly black communities in apartheid South Africa. Since its inception 30 years ago, WSU FHS has become a leader in developing innovative, contextually relevant approaches to health education and in adopting a people-first philosophy to delivering socially responsible health care. 80% of WSU FHS graduates are still practising in deprived
areas of two rural provinces of South Africa (3). Another member of THEnet is the Ateneo de Zamboanga University School of Medicine (ADZU SOM) in the Philippines. Zamboanga is an extremely low resourced, politically unstable region with many historically doctorless communities. ADZU SOM began in 1994 as a community movement with a working capital of $550, and it has been successful in producing a rural workforce with volunteer local clinician instructors. Since the first graduating class in 1999, more than 80% of ADZU SOM graduates continue to practice locally in underserved communities, and the number of municipalities with a physician has increased by 55%. Additionally, the region’s infant mortality rate has decreased by close to 90%, down from nearly 80/10,000 live births to approximately 8/10,000 live births (14-15). Northern Ontario in Canada is a vast historically underserved rural region with a diversity of communities and cultures most notably Indigenous and Francophone peoples. The Northern Ontario School of Medicine (NOSM) opened in 2005 with a social accountability mandate focused on improving the health of the people of the region (16). Ninety-two percent of all MD students come from Northern Ontario with the remaining 8% coming from remote rural parts of the rest of Canada, and substantial inclusion of Indigenous (7%) and Francophone (22%) students(17). 94% of NOSM MD graduates who completed NOSM postgraduate education are practising in Northern Ontario including 33% in remote rural communities(18). After ten years of recruiting applicants from an underserved health workforce region, there are signs that NOSM is having a pervasive, extensive and constructive influence on Northern Ontario (17-19). Guided by this alternative international standard for health workforce education, decision makers should draw upon the expertise of communities to identify community-specific health priorities and build capacity to enable the recruitment and training of local students from underserved areas to deliver quality health care in rural and underserved community settings.

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<td>Name/Position</td>
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<tr>
<td>Organization</td>
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<td>Type</td>
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EFN beliefs reform implies transparent and supportive legislation (designed with stakeholders), new financing systems, different delivery of care models and political commitment. Therefore, we need to move from an old fashioned medical model of treatment towards an integrated care system, in which nurses coordinate care between sectors. “Integrated care” refers to the management and delivery of health and social care services so that citizens receive a continuum of preventive and curative services, according to their needs over time and across different levels of the health and social system. It is generally accepted that failure to better integrate or coordinate health and social care services between primary and secondary care can result in suboptimal patient/health outcomes, such as unnecessary or avoidable hospital re-admissions or adverse drug events. Integrated care can improve the continuity of care for individuals by breaking down any barriers between primary and secondary care settings. The EFN is strongly in favour of investments made in models of integrated care. The current models piloted have a component of patchwork and anxiety of giving up power. In contrast, investing in community care and in its nursing workforce will help to deliver positive health and well-being outcomes and increase the quality of care, improve cost-effectiveness and free hospitals to provide more acute and specialised care when needed. Community care is not a competitor of hospital care, instead, both ecosystems are complementary and should merge into an integrated ecosystem driven by continuity of care. A renewed focus on delivering health and social care in the community implies an appropriately designed frontline community nursing workforce composition at the interface of health and social care services. This is instrumental in co-ordinating care pathways and promoting a healthier population that is empowered and able to live independently. EU nurses are concerned that too much focus in placed on the medicalisation of chronic illness and ageing. Sweden was one of the first European countries to create nurse-led clinics for patients with long-term conditions such as diabetes and heart failure, but nurse-led clinics are becoming integrated in many countries: nurse-led clinics are present in Denmark (municipality health clinics are mainly led by nurses and provide prevention and rehabilitation care); in England, Estonia, Finland, France, Sweden and two regions of Spain (Andalucía and Catalonia). In Iceland, nurse-led clinics have been developing where there is a special emphasis on assisting patients and their families towards greater self-management, particularly in relation to the treatment of chronic illnesses. Nurse-led clinics are operated either in collaboration with hospitals or primary healthcare centres as outpatient clinics for a range of patient groups and their families. The body of evidence from across Europe on the benefits of such nurse-led initiatives is growing. While nurses are ideally positioned to both lead and support such developments, there is limited
nursing research in this area. Developing greater cohesion in models of integrated and continuity of care implies giving a gender approach to its scaling-up design. Traditionally, healthcare has not taken into account any gender aspect and technology has equally disregarded special gender lenses. When designing an integrated ecosystem, which is gender sensitive, implies connecting EU Research & Innovation to the field work, there where people live and work. This equally implies the commitment of the highest political authority in health and social care and the analysis of policies and political strategies to make the integrated health and social ecosystem work together and share one budget to increase cohesion. On a European level, there is a harmonisation of the nursing education laid down by Directive 2005/36/EC. The Directive has a substantial impact on advancing the profession of nursing and the status of nurses across the EU and Europe. Concretely, the Directive has brought in place a set of eight competences that all nurses should have acquired when completing their education regardless of the Member State in which they conducted their studies. In this way, the Directive has been the cornerstone of massive educational reforms, raising the quality bar of nurse education. At the same time, and due to this legislative framework, nursing is the second most mobile profession in the EU. This shows how harmonisation of education can advance international professional mobility. The EFN strongly believes that the benefits are in favour of the risks, when it comes to eHealth. Therefore, it sees proposes actions to facilitate innovation and up-take of eHealth and mHealth solutions at international level, especially with the workload that healthcare professionals are confronted with, in times of austerity. The costs in terms of education are lowered by the fact that nursing student entering the bachelor today are acquainted with mobile devices and the use of apps. Education of nurses in this way is economically optimal because play a pivotal role in creating trust among the users and in educating and training the patients.

References


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### Contribution

The key risk of imbalances and inequitable distribution of health workers is a continuing increase in inequitable health outcomes in rural and remote areas and for disadvantaged or marginalised populations. An essential strategy for mitigation is the establishment of socially accountable health professional schools. Education and training models can be transformed to build a fit for purpose health workforce using a social accountability framework such as developed by the training for health equity network - THEnet Social Accountability Framework. The literature supports the contribution of key inputs and outputs and the logic model evaluation framework predicts improved health outcomes. Important inputs include preferential selection processes to admit and support students from local rural communities and underserved population groups. Collaborative partnerships with communities and community-engaged placements in underserved areas positively impact the learning and attitudes of students. Students of socially accountable schools with extended rural placements are more likely to stay in rural areas and serve disadvantaged communities. In order to ensure the implementation of the Commission’s recommendations, the key elements of social accountability in health professional education; social accountability values shared by faculty and reflected in the curriculum and learning experiences of the students, attributes of fit for purpose graduates and their impact on communities and health outcomes - should be integrated into a monitoring and accountability framework. Two case studies provide pragmatic evidence of these principles and are described in the accompanying paper.
**Submission 18**

**Name/Position**  Marilyn A DeLuca, Adjunct Associate Professor, Founder  
**Organization** New York University; Global Health-Health Systems-Philanthropy  
**Type** Academia  
**Country** United States of America  
**Question Answered** 2, 4, 5, 7, 9, 11

**Contribution**  The Global Summit, Strengthening 21st Century Global Health Systems: Investing Strategically in the Health Care Workforce, convened by New York University College of Nursing in October 2011, brought together more than ninety leaders from multilateral organizations, governments, academia, and foundations. The Summit aimed to educate and catalyze funders, especially foundations, on the need for resources to strengthen the health care workforce. In the course of our review of health systems strengthening and health workforce initiatives, we observed that there is a dearth of information on funding human resources for health (HRH), especially from private donors. The gaps in the literature include a compendium of what has been funded; the number of resources that has been invested at local, national, and global levels and by cadre; the outcomes of funding; and finally, the needs and opportunities to support the development of the global health workforce. The goal of this paper is to help fill those gaps to inform funders and organizations interested in investing in human resources for health. We suggest that increased, strategically directed resources, especially from private funders, are the necessary investments needed to accelerate achievement of health targets. Private funders can further the agenda to improve population health by strategically partnering with governments in low- and middle-income countries to complement their investments in HRH. The specific aims of this paper are to (1) examine the key issues challenging global health workforce development, recruitment, deployment, and retention; (2) review the progress and effectiveness of interventions related to strengthening the global health workforce; (3) identify funding gaps, strategies, and opportunities to inform funders; and (4) stimulate funders and catalyze productive cross-sector collaborations that will contribute to the production and retention of skilled health care providers working for efficient health systems.

**References**  


### Contribution

Health workers are essential to population health. This paper addresses needed global and country-level action to build human resources for health data, systems and impact measurement. Using a conceptual framework drawn from theories on political prioritization (Shiffman 2007) and public mandates as mechanisms for reform (Kingdon 1984) we argue that increasing global health needs are driving political action to develop human resources for health data and measurement systems. To assess the evidence of past calls for health workforce data measurement, we conducted a systematic review of documents published 2000-2014 searching for evidence of explicit calls for building health workforce data and measurement systems. Sources of evidence include World Health Assembly Resolutions and documents and events generated by key stakeholders: global organizations; civil society; donors; NGOs and professional organizations. We found that few World Health Resolutions contain specific language that addresses human resources data or systems. Stakeholder documents however, contain more evidence of calls to expand health worker data and systems. The Sustainable Development Goals, national commitments to implement Universal Health Coverage, efforts to increase the health workforce and strengthen global governance and accountability are recent initiatives with potential to improve access to health services. We posit that the temporal convergence of these initiatives is opening a window that will accelerate global and country-level receptivity and action to improve health workforce data and impact measurement necessary to build better health systems and improve population health.

**Key words:** health workforce; health system strengthening; measurement and accountability from health; human resources for health; global governance; health reform

### References

[1] Political agenda setting and public policy are complex processes that require a number of inter-connected conditions. The conditions can exist when: 1) national political leaders express sustained concern for an issue (Shiffman 2007); 2) government enacts policies and strategies to address the problem and 3) government allocates adequate budgets to support the issue (Ibid). Kingdon (1984) suggests that receptiveness for major policy change depends on the presence of a strong public mandate. Building off these constructs, we posit that the increasing focus on the health workforce from 2000 through 2014 generated global and national policy imperatives to develop and implement HRH data, systems and impact measurement. Shiffman’s and Kingdon’s perspectives underpin our conceptual framework: increased focus on human resources for health has capacity to generate policy imperatives that advance global governance and national accountability for national, regional and global HRH data, systems and impact measurement. Shiffman, J. Generating Political Priority for Maternal Mortality Reduction in 5 Developing Countries, 2007. Available
at:
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1854881/?report=readKingdon,JW.
I. Overview: Across the globe, the major factor limiting access to health care, from an attended birth through dignified end of life care, is the lack of health care providers. Globally, 1 to 3 billion people do not have access to a health provider (ILO 2010; WHO 2011); each day 1,000 women die in childbirth, and each year, over 36 million people die from non-communicable diseases (NCDs) alone (WHO 2010, 2012). The aim of this book is to contribute to the knowledge on health systems strengthening and help inform private and public funders, policy makers, and implementers interested in increasing the number of available, competent, and retained health care workers in settings across the globe. Gaps in the health care workforce exist across all cadres, from community health volunteers through health professionals that include nurses, midwives, and physicians. Severe shortages exist in low and most middle-income countries (LMICs). Today, near all of the 57 crises low-income countries remain far from reaching the World Health Organization’s minimum target of 2.3 health workers per 1,000 population. Building the health care workforce requires cross-sector collaboration and sustained investments at the country level. Public and private funders have traditionally supported ‘vertical’ or disease-specific conditions, notably infections and vector-borne illnesses, including HIV/AIDS, TB, and malaria. The majority of funders, particularly private foundations and corporate philanthropy, have been reluctant to support health workforce development. Funders that are currently tackling human resources for health (HRH) seek evidence of best practices and understanding of how to implement scalable models related to health care workforce. We hope that the collective works in this book will: (1) serve as a vehicle to disseminate timely and needed information related to strengthening the global health care workforce; (2) contribute to knowledge and science to improve health systems; (3) bring added focus frontline health workers and their essential role in population health; (4) foster collaborations on HRH in the context of achieving the 2015 Millennium Development Goal target and post-2015 health targets, and (5) contribute to knowledge needed to ramp-up production and retention of health workers given the increasing global prevalence on non-communicable diseases and the projected the associated human and economic costs that could impact low and middle-income countries.

References

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DeLuca, Amy Hagopian and Ann E. Kurth
SECTION II. NOVEL APPROACHES to HEALTH PROFESSIONAL EDUCATION
SECTION III. VOICES from the FIELD
Innovative ways of financing health workforce investment can include: Public private partnerships (PPP) to leverage private health science teaching institutions so as not to rely solely rely on production capacity of government institutions. In Africa, Ethiopia has implemented this effort (Health Sector Development Program, Ministry of Health, FDR of Ethiopia). More incentives (e.g. tax breaks, reduced utility bills, etc) and proper certification and licensing regulations should be in place to ensure the produced HRH can readily enter the workforce. The private health care sector’s depth of outreach often extends far more than the public health care facilities (e.g. rural areas of some States in India). Government incentives can capitalize on this while regulating the private sector to comply with quality of care, case management and health information system standard as well as subsidizing the private sector through community-based or subnational health insurance to reduce the financial access barriers. (India National Health Strategy 2010; Ministry of Health, India and USAID-funded ACCESS project case studies in Rajasthan State). In mitigating risks and impacts of imbalances and inequitable distribution of health workers, it is important to analyze maldistribution along five axes. By level of care (primary, etc), geographically (e.g. rural/urban), within medical disciplines, between preventive and curative disciplines, between public & private sectors and regarding gender differentials in across these axes. HRH gender often influences health-seeking behavior, particularly among women, adolescent girls and their children (MOPH; Afghanistan Joint Health Sector Assessment; March 2015 and Agha Khan Health Network; Health Sector Action Plan 2010). Policy measures aimed at rectifying these imbalances should pre-service education and the existing workforce. In the pre-service phase, female students should be incentivized to pursue medical, nursing, midwifery, laboratory and other health sciences. In the workforce phase, countries should develop smart retention strategies, including professional recognition, accelerated career paths, preconditioning minimum service years in locations determined by health authorities, local recruitment of HRH, supportive supervision, clinical mentoring, learning opportunities, providing safe and well-supported work environments. “(B)enefits ... from international mobility of health workers” can be optimized without violating their freedom of movement rights. “Barrier methods” (e.g. withholding certification, banning of travel or producing HRH categories with deliberately non-exportable/convertible degrees) are ineffective. Codes of Conduct are neither binding nor enforceable. Instead, countries can: Do more to retain their HRH, and Adopt HRH export policies and strategies: E.g. Emulate Philippines’ HRH strategy which meets domestic HRH demand and exports HRH to specific “markets” (e.g. USA); gaining huge remittances from emigrating HRH and broad international exposure when they return. Develop common matriculation & licensing systems to share HRH (East African Community).Measures to ensure
that HRH education and training models adequately respond to health needs include the distribution and deployment suggestions in Question 2 above and: Adopting task-shifting as a proven policy tool (Ethiopia Health Sector Development Program II; and WHO; 2007) to adapt the skill mix in ways that are more responsive to health sector challenges. Increasing the level of proficiency and the numbers of mid-level HRH service providers, Ensuring clinical mentoring, continuous medical education and supportive supervision to HRH. Utilizing telemedicine to deliver CME, clinical mentoring, on-the-job training and patient consultations (Afghanistan, Agha Khan Foundation, Badakhshan; 2014) Increasing district-level public health management skills. Formulating special HRH deployment, retention & management standards for isolated, remote or inaccessible locations (eg. small islands, rural locations, etc). Ensuring HRH education and training capacity is decentralized, responsive to diverse population needs and benefits from sharing of educational institutions (e.g. Caribbean & South Pacific medical schools sharing campuses) Institutional reforms needed to strengthen governance for the health can include: Adopting systems and developing capacities whereby health professional associations and health sector trade-unions practice self-regulation (with lighter load for government regulatory oversight), Ensuring policy, strategy and management decisions are based on evidence and are data-driven. Ensuring all countries have national HRH management frameworks addressing all components of the WHO Human Resource Management Framework and which are developed in close consultation with private sector, civil society, patient/consumer protection groups, finance, health, education and other stakeholders. Using existing advances in technology to maximize HRH potential includes: Patient SMART cards and complete electronification of facility HMIS to improve patient referral, maximize provider-patient interaction, reduced patient waiting time, utilize clinical data in facility-level and district-level management, reduce HRH M&E/reporting time (US PEPFAR; Ethiopia; Zambia; 2008). Using telemedicine to transmit clinical mentoring, real-time patient consultation by specialists and CME can maximize the use of existing HRH by improving their efficiency.

References

Prelude: This contribution is based on the report ‘Circular Migration of the Health Workforce’ (Kroezen, 2016), published in the framework of the EU Joint Action on Health Workforce Planning and Forecasting and based on a literature review and evidence gathered by the JAHWF. Circular migration The WHO Global Code of Practice on the International Recruitment of Health Personnel states: “Member States should facilitate circular migration of health personnel, so that skills and knowledge can be achieved to the benefit of both source and destination countries” (Art. 3.8). In recent years, circular migration has been promoted as one of the most promising solutions to the challenges posed by health workforce migration, including brain drain and the inequitable distribution of health workers among countries [1]. Definition and dimensions The phenomenon of circular migration means repeated migration experiences involving more than one emigration and return cycle, between two countries. While there is not one standard definition of circular migration and many variants exist, most definitions include at least the following dimensions [1, 2, 3]: Spatial: involvement of source and destination country, Temporal: non-permanent migration, Iterative: migration process includes more than one cycle, Developmental: ‘triple win situation’ (see below) Further subdivisions can be made in managed circular migration (organized by source and/or destination country) and spontaneous circular migration (usually caused by fluctuation in supply and demand), but these are hard to distinguish in practice. Circular migration is being promoted as a ‘triple win’ solution, bringing benefits to destination countries, source countries and migrant workers. Yet this idea has also been contested. Doubts and concerns are generally focused on the perceived benefits for migrant workers and, to a lesser extent, source countries [2]. Below, the most commonly cited advantages and disadvantages in the debate are summarized: Advantages for: Destination country: Health worker shortages handled in a flexible and timely way, savings in training of health professionals, part of a development friendly national migration policy, limited integration costs. Source country: Benefit from inflow of remittances, brain drain human capital loss not as great, health workers return with greater skills and enhanced networks and ideas, contribution to health of the nation. Migrant worker: Enhances income, skills and experience, able to contribute to health of homeland population, easier return to a workplace and family in the home country. Disadvantages for: Destination country: workers not available on a permanent basis, complications of organization health system, governance challenges, difficulties for immigration policy. Source country: Loss of skills for part of the time, difficulty of organizing health system with personnel only in the country for a limited time, governance challenges. Migrant worker: Disruption and costs of moving, social costs of separation from family for part of the time, difficulties of adjusting to two work
Limited evidence and knowledge base on circular migration of the health workforce. So far, the evidence on circular migration of the health workforce is limited, partly because it’s a relatively new phenomenon. More data, research and knowledge regarding its prevalence as well as its health workforce impacts in sending and receiving countries are needed [4]. Example of good practice in circular migration of the health workforce. Despite the general lack of evidence on circular migration of health workers, good practices can be identified based on their reported positive outcomes for source and destination countries and health workers. Many of these initiatives and collaborations take place outside the realm of formal legislative and policy structures. MIDA Ghana Health projectThe Migration for Development in Africa project facilitates the temporary return to Ghana of Ghanaian health professionals from the diaspora residing in the Netherlands and other EU countries for the benefit of local health institutions. Between 2005-2008, there were 67 assignments and between 2008-2012 215 assignments. Positive results have been reported by Ghana, destination countries and health workers [5]. Six guiding principles for cooperation in circular migration of the health workforce as identified by the JAHWF: Consider circular migration as one option among others, base circular migration on the principles of the WHO Code and aim for a ‘triple win’ outcome, choose cooperation structures primarily on the HWF needs of the source country, adapted to the envisioned goal, involve all relevant actors, acknowledge and integrate importance of language skills and recognition of professional skills, need for more data and research. 

References


More than 32,000 general practitioners working in Algeria for 42 million inhabitants. General practice specialty does not exist in Algeria, they are medical doctors after 7 years of initial basic training without specificity in general practice / family medicine. Algerian society of General Medicine launches a training program to develop and improve the skills of its doctors. Through a new form of postgraduate training call CPD. CPD requires trainers to adapt the general practice / family medicine. The training of trainers is also important for the initial training in medical schools. We need help to get to this goal as we did and will not have professional from the inside.

References
Pharmacy Education: Responding to the Challenges of Epidemic Increase in Non-communicable Diseases

The traditional -disease- diagnosis- drug-dispense model -centred on Biomedical approaches to manage infectious diseases has proven inadequate to address the challenges of current and emerging infectious diseases in India and will be in capable of managing the epidemic rise of non communicable diseases (NCDs). Despite the progress made in India in terms of the life expectancy and healthy life expectancy (Table 1), the enormous challenges of managing the Triple burden of diseases in India requires a new approach in line with the global agenda–especially in training of pharmacists. Table 1: Life Expectancy in India

<table>
<thead>
<tr>
<th>Sex</th>
<th>1990</th>
<th>2000</th>
<th>2013</th>
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<tbody>
<tr>
<td>Female</td>
<td>58</td>
<td>63</td>
<td>68</td>
</tr>
<tr>
<td>Male</td>
<td>57</td>
<td>61</td>
<td>65</td>
</tr>
</tbody>
</table>

Healthy life expectancy at birth

| Sex   | 53   | 59   | Male | 52   | 56   |

Life expectancy at 60 years

| Sex   | 16   | 17   | Male | 14   | 15   | 16   |

Source: WHO Online data.

The WHO highlights the current pitfalls in the health workforce education which includes fragmented curriculum reform, poor inter-professional collaboration, emphasis on technical and disease-based focus without basing it on contextual understanding of social determinants of health, tertiary health system based focus instead of a primary health care based training and predominantly focused on a curative model rather disease prevention and continuum of care model (WHO Report 2013-2015). The current challenges in addressing the epidemic rise of NCDs (Table 2) requires a rethinking in the way courses are designed for future pharmacists so that it is more fit for purpose in terms of changing trends in the area of disease prevention and health promotion while continuing with the current focus on treatment and pharmacotherapy. Table 2: Age-standardised Death Rate due to NCDs in India

<table>
<thead>
<tr>
<th>Causes of Death</th>
<th>Age-standardised Death Rate per 100,000 Percentage to All Deaths</th>
<th>Male</th>
<th>Female</th>
<th>Cardiovascular diseases</th>
<th>348.9</th>
<th>264.6</th>
<th>26 Cancers</th>
<th>79.0</th>
<th>66.3</th>
<th>7 Chronic respiratory diseases</th>
<th>188.5</th>
<th>124.9</th>
<th>13 Diabete</th>
<th>30.2</th>
<th>22.7</th>
</tr>
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</table>
| 2All NCDs       | 785.0 586.6 60. The probability of dying between ages 30 and 70 years from the 4 main NCDs: Adult risk factors | 25% | 4% Total alcohol per capita consumption, in litres of pure alcohol (201 8.0 | 0.5 Raised blood pressure (2008) | 21.3% | 21.0% Obesity (2008) | 1.3% | 2.4% Source: Compiled from World Health Organization, 2014a, 2014b. As a way forward, the
Immediate action can be directed towards developing continuing education programs for in-service pharmacists based on feedback from multiple key stakeholders and global policy guidelines (WHO Global Action Plan for NCD). The medium and long term focus of incorporating a preliminary foundation course for NCD specific challenges in India, to train health workforce requires initiation of dialogue between several key stakeholders, Ministry of Human Resource Development and statutory bodies such as All India Council of Technical Education and Pharmacy Council of India. This will also facilitate creation of new jobs in the health sector that focuses on proactive and community based health education and self-management of chronic diseases instead of the traditional role of dispensing medicines for patients based on prescriptions. Investment on introducing these courses which are supported by the government’s reallocated budget that focus on health, will have positive effects on employment, economic growth and job creation. These initiatives will reduce the negative effects of large sections of the population that succumbs to NCDs which results in reduced productivity along with their increased out-of-pocket health expenses. Overall the negative effects of the vicious circle of poverty leading to NCDs and NCDs accelerating poverty can be broken by introducing more scope of practice in pharmacy education which is community based and disease prevention focussed. 

References

http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236_eng.pdf

Investment supported by effective policies on the recruitment, education, and retention of health labour is paramount. Only competent, sufficient in number and proper mix of healthcare labour can meet future needs and produce inclusive economic growth. Optimisation of their scope of practice, with a view to make the best use of their qualifications and skills [1] in a collaborative practice [2] environment, is crucial. The investment in the health sector needs to be supported by related policies and incentives. An example of proper incentive to achieve the above is NHS England. In 2015, £15m scheme was launched, that funds, recruits and employs clinical pharmacists in GP surgeries. This incentive serves the public health and UHC objective, as it offers patients with specialist’s support to deal with medicine-related issues. It also mitigates the burden of unprecedented workloads GPs are increasingly struggling with. [3] Another condition for investment is to define clear objectives in terms of pharmaceutical workforce. Some governments, like in Turkey [4] and France [5], define a ratio between annual turnover of community pharmacy (as a reflection of the level of activities) and the number of pharmacists working in a particular pharmacy. Professional autonomy is an imperative for keeping the health sector employees aligned with the public interest. For example, when pharmacists or other health care professionals are employed, whether by a (pharmacy) owner or a health care institution, the tension between the professional imperatives of the practitioner and the financial interests of the owner or institution may compromise the professional service provided to patients. There is a need to ensure that the public receives optimal value from the health sector employees not compromised by business imperatives dictated by the employer (owner). [6-7] Sufficient measure of professional autonomy in all sectors of health professions is needed to ensure the objectives to achieve Universal Health Coverage and produce inclusive economic growth via public health.

References


There is much evidence on how successful health employment investments and strategies on pharmacy workforce can result in substantial savings. As the third largest healthcare labour group, pharmacist workforce demonstrated its ability to foster the efficiency of health sector and contribute to its inclusive growth. Pharmacy labour, if used to their full potential, can have significant positive impact on the fast return of investment, or even on vast savings in healthcare expenditures and improved health of the population. Evidence shows that pharmaceutical care is cost effective. [1] Pharmacists reduce the use of inappropriate or unnecessary medicines, [2] and their interventions in prescription handling can save medication costs and costs incurred from conducting health services. [3] Pharmacists have impact on lowering death rate and admissions rates. [4] Royal Pharmaceutical Society in Great Britain summarised evidence from the peer-reviewed literature 1990–2001 demonstrating the contribution of community pharmacy to improving the public’s health. [5] A cluster randomized controlled trial (conSIGUE Program) carried out Spain in 2011-2013 demonstrated that preventing medicine-related problems and providing substantial cost-saving to the national health system via Medication Review with Follow-up (MRF) Service delivered by pharmacy labour and targeted to elderly polypharmacy patients provided 3 to 4.5 times higher savings than the costs of the service provided by the labour itself. [6] A systematic review (PROMISe, 2002) in Australia found that 7.1% of hospital admissions (and up to 30% of admissions for patients over 75 years of age (Second National Report on Patient Safety, 2003)) were medicine-related. Pharmacists are well-positioned in preventing, detecting and resolving medicine-related problems during the course of their routinely undertaken activities. The PROMISe III demonstrated that each clinical intervention in community pharmacy would reduce healthcare utilisation by AU$360 on average and increase the number of quality adjusted life years (QALYs) by 0.01. If all pharmacies in Australia used the PROMISe program, approximately AU$630 million of healthcare costs would be avoided and 20,000 QALYs would be gained, each year. Even with projected costs for IT development, remuneration of pharmacies and costs to government to implement and monitor the program, it would still result in a net benefit to government of AU$900 million over a five-year program. [7-8] The 2011 Report to the United States Surgeon General [9] shows pharmacists’ ability to achieve significant economic savings in a broad range of clinical categories among multiple care settings (hospital, community, etc.). The report summarizes series of studies [10-12] that calculated economic value of clinical pharmacy services in the form of benefit to cost ratio (gross economic benefits derived from the service, by reported total costs to provide the clinical pharmacy service described for the same time period). Even at the ratios’ lowest level, clinical pharmacy services benefit is still higher than the...
cost. For each dollar invested in the clinical pharmacy service over the period from 1988 to 2005 (nearly two decades), the overall average benefit gained was US$10.07 per US$1 spent. On some pharmacy services the return is higher. Return on investment (ROI) from medication management services demonstrated an ROI of as high as 12:1 (reflecting the value of the service vs. the cost of delivering the service) and an average of 3:1 to 5:1. This value is based on the ability of medication management services to reduce hospital admissions, reduce the use of unnecessary or inappropriate medications, and reduce emergency room admissions and overall physician visits. Given the significance of this calculation and the challenging economic environment, the ROI of medication management services can be seen as a legitimate cost-containment and cost-effective strategy for health plans and other third party payers. There are many other studies. [13-25] demonstrating how pharmacist are reducing health care costs by improving outcome, improving medication safety and reducing the use of unnecessary medicines. Moreover, pharmacy labour is evolving with the provision of new services, such as management of medication in patients on chronic anticoagulation therapy or the point-of-care testing for influenza or streptococcal infection of the throat. [26] Impact of investments or policies is often measured the way health budget are structured around: primary care, secondary care and medicines. Unfortunately, when an intervention imply an increase of expenditure in one component (medicines) but results in a decreased costs in other components (secondary care for instance), the relationship between the two changes is not visible. If budget was structured differently (primarily through groups of diseases and only then for each group, through primary, secondary care and medicines), it would be easier to conduct a review of the financial implication and measure returns on investment. Similarly, one strong limitation of any study focusing on the value of a pharmaceutical service (and pharmacy workforce) tends to limit to the direct and indirect savings generated by such service and rarely includes the economic impact of a pharmacist who is employed (who in turn will contribute to higher consumption in the country).

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The inaction in the health and social sector labour market leads to missed opportunities in more optimal spending on healthcare, for example a half trillion dollars in annual global health spending could be saved through the responsible use of medicines, where pharmacist labour has been identified as a key lever. [1] As mentioned earlier (see FIP’s previous contribution - question 3), there is a strong evidence that investment in healthcare workforce and their employment leads to reduction of overall costs and provision of free services that they subsidise form their routine activities. Community pharmacy staff uniquely and invariably combines the functions of professional and retail services within the same premises they run. Unlike most other professional groups, pharmacists do not have a private professional client relationship based on a fee for service. Instead, the individual may simply walk off the street and seek ‘free’ advice without an appointment, contributing towards Universal Health Coverage. Rather than charge for this advice directly, the pharmacist subsidize this service from the dispensing of medicines (including related fees and add-up remuneration) and the other products sold in the pharmacy. Community pharmacy contributes AU$349 million to the Australian health sector annually, avoiding 262,000 days in hospital; 1.48 million visits to GPs and medical specialists; and 53.1 million sick days or days of ill health in Australia. [2] Similarly, incremental cost-benefit analysis performed in Ontario province in Canada demonstrated that net present value of CA$143.14M (CA$20.43M - CA$536.46M) can be realized by the province within a five-year time period from 2013-2017 if the government were to fully implement and reimburse pharmacists in five expanded scope services: Smoking Cessation; Influenza Immunization; Minor Ailments Prescription Renewals; and Pharmacy Opinion Programme & Independent Adapting. [3] In Finland the services provided by pharmacy labour for free, saved more than half a billion Euros in health care costs in 2010. These savings are more than pharmacies share (€481 million) of all medicine sales in 2009. This means that these savings generated by community pharmacies exceed the costs of outpatient medicine distribution. [4] However, these direct benefits to healthcare system are challenged when there are not enough pharmacists, like in too many countries. [5] For instance, Uganda, with a population of almost 27 million, struggles to effectively deploy their limited human resources of 249 pharmacists (1 pharmacist per 100,000 population, which is 30% lower than the required number by the Ministry of Health, with only 25 graduates per year). Moreover, 90% of these pharmacists practice in the Central region leaving the other greatly underserved. [6] The precise number of economic costs of inaction costs in this labour sector are unavailable but could be measured by the saved lives or life expectancy rates. Community pharmacies have
been identified as an easily accessible and cost-effective platform for delivering health care worldwide. [7] They have a role to play in achieving universal healthcare coverage, especially in providing care in rural and remote areas where primary care physicians are scarce. [8] Pharmacies are private community based health care providers ensuring public health, and often the only one which geographical and topological distribution (including a minimum distance between pharmacies, minimum number of inhabitants per pharmacy, etc.) is organised in many jurisdictions by law or financial incentives and/or regulations, so that all the population has adequate access to health care regardless of where they live. Among positive examples, England supports rural pharmacies by enforcing incentivising allowances on remunerable services to help negate the extra costs as a result of travelling for medicine deliveries. [9] In Canadian province Ontario, rural pharmacies receive a higher dispensing fee than urban pharmacies to cover them adequately for their operating costs. Continuing such support is crucial to ensure provision of basic health care in rural areas. Some governments have developed state-owned community pharmacies in areas where private pharmacies are not established because they would not be financially viable. “Farmárias Populares do Brasil” (Popular Pharmacies of Brazil) are pharmacy premises owned by state and employ pharmacists to work there. Such pharmacies only dispense medicines on the List of Essential Medicines (112 medicines plus male condoms) sold at cost price, i.e. 10-15% of the price generally paid in other pharmacies. In line with UHC goals, medicines for highly prevalent chronic diseases are provided at no cost for patients. [10] To facilitate the employment, Australian government offers substantial support for rural and remote clinics with an emphasis on appropriately training the next generation of rural pharmacists. Multiple allowances fund the cost of pharmaceutical internships as well as the operational costs of running pharmacies in such areas.

References


## Submission 28

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<tr>
<th>Name</th>
<th>Zuzana Kusynová, Policy Advisor &amp; Project Manager</th>
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Education and training models should be transformed to build a fit for purpose health workforce. FIP would like to stress that the best way countries can support health labour to acquire the requisite knowledge and skills to engage with other sectors, and effectively communicate the need for action across sectors for improving health and health equity; is through a competency-based approach via proper planning and development. FIP, through its Education Initiative (FIPEd), is investing 2 million USD over 5 years, in order to support the reform of the education of pharmacists, so that they have appropriate competencies to respond to the current needs of improving health systems. [1] Education models of building a fit for purpose health workforce need an active dialogue between educators and the profession. FIP will host a the Global Conference on Pharmacy and Pharmaceutical Sciences Education, to be held on 7 and 8 November 2016 in Nanjing, to identify and address key issues related to education and the pharmacy workforce, in collaboration with all stakeholders. [1] Moreover, FIP assists the countries in defining the expected profiles of pharmacists (tasks and job descriptions), based on local needs. These profiles are then turned into competency framework, which serves as a foundation for curriculum development. This allows redesigning of initial education, as well as of training programmes and continuous professional education to ensure that pharmacy workforce have the right skills and is in adequate number. [1] Many schools of pharmacy in developing countries lack adequate facilities to provide all aspects of the pharmacy curriculum. One of the most common deficiencies is the lack of basic laboratory equipment where resources are scarce. [1] FIP ‘Lab Box’ concept envisaged a box of equipment suitable for one student to be able to conduct laboratory exercises as part of the pharmacy educational curriculum. The outcome was to improve education in science-related aspects of the curriculum in resource-limited schools of pharmacy in developing countries. This was original piloted successful in the Pharmacy Department in the College of Medicine, Malawi. [1] One should however note that health labour planning and numerus clausus policies are too often based on silo approaches, looking at each profession in isolation. There appears to be a lack of proper coordination in labour planning and education policies among professions. [2] In the process of monitoring and accountability framework for the implementation of the Commission’s recommendations, it is important to effectively collect and monitor the data on
the health care labour. This can be facilitated by the professional bodies representing different health care workers. In Switzerland, France, Japan, to list only a few examples, the professional body representing pharmacists, is collecting and evaluating the data on pharmacy profession and its evolution in numbers on annual basis. The data are publically accessible via their website.

References
To achieve the goal of providing adequate access to services with fewer physicians on site, the innovations include encouraging the transfer of competencies from doctors to [...] other healthcare professionals (immunisations, triage, etc.), and the development of telemedicine to connect patients and doctors through remote distance where and when needed. There are growing numbers of initiatives underway in Canada, Australia, Finland, but also Portugal and Switzerland. [1] Technology enables broader scopes of practice for non-physician providers with the required training and skills, and making greater use of innovative health service delivery models, notably telemedicine. In Switzerland, a new telemedicine service called “netCare” piloted successfully in 200 participating community pharmacies and is now offered at national level. The service offers the patients fast medical advice on minor alignments or injuries directly in pharmacies – without a need for prior notice and during pharmacy opening hours. Depending on the result of the initial triage and consultation, based on a protocol approved by medical doctors, the pharmacist can recommend a medication or liaise with a physician via high-definition video transmission. [2] During the pilot phase (April 2012 – December 2013) nearly 4,000 “netCare” consultations were offered: 70% of cases were resolved exclusively in the pharmacy, 20% had to use a telemedicine and 10% of cases had to be referred to another health professional. In a context of rapidly evolving technologies and health service delivery models, there is a need to adapt education and training programmes, encourage continuous professional development and the regular re-certification of health labour to ensure that their skills are kept up-to-date. The emerging scientific innovations and practice should go hand in hand. [1]

References
With the increasing focus on linking investment in the health workforce to broader socioeconomic impact, it is important to examine countries’ health worker skill mix needs while taking into account countries’ various stages of economic transition. Figure 1 in separate document at end of spreadsheet) demonstrates skill mix trends across countries using available health worker density data. Like total health spending, health worker skill mix and density change through economic transition. As socioeconomic status and domestic health expenditures rise, skill mix becomes more heavily composed and reliant on more ‘traditional’ clinical cadres—nurses, midwives, doctors. In countries with lower to lower-middle income status, the role of the community workforce amongst the health worker skill mix is underscored. Figure 1. Health Worker Skill Mix and Economic Transition (1) (refer to emailed attachment) Community level cadres, often referred to as community health workers, are primarily women and selected by the communities in which they serve, are widely acknowledged as integral to increasing access and equity to health care, and fulfill health worker supply gaps created by internal and external workforce migrations.(2,3) Across global health initiatives, significant resources have been allocated to the development and support of these cadres. However, varying typology and classification of cadres at the community level make it very difficult to quantify this workforce, and they are not always integrated into national health systems and health worker plans. Accordingly, there has been greater recognition of the need for harmonization of these workers to ensure alignment with national strategies and long-term viability.(4) This has been coupled with recent resurgence of global and country level attention to the investment and further development of the community health workforce.(5,6) The estimated 7.2 million global shortage of health workers, projected to rise to 12.9 by 2035, most severely impacts developing countries.(7) Recent estimates indicate the global shortage may be even more severe, at 10.3 million, when considering the deficit of health workers in rural areas, which are vital to increasing accessibility to health services for the underserved and advancing Universal Health Coverage (UHC).(8) However, these estimates are based on recommended density ratios for doctors, nurses, and midwives alone, due to limited available country workforce data. Better estimates could be generated with data on the diverse skill mix needs across countries. A better understanding of the needed skill mix of countries that includes the important role and classification of the community workforce is integral to inform the investment needed in health and social sector.
employment. The following actions are recommended: 1. Increase efforts for coordinated health worker data collection that better reflect the entirety of countries’ workforces: Limited availability of robust and routine health workforce data has resulted in many piecemeal efforts to capture discrete aspects of countries’ workforces such as community health workers. Stakeholder alignment to the upcoming WHO National Health Workforce Accounts is needed to ensure their utilization as a key vehicle for overcoming health worker data gaps.(9) 2. As countries advance health worker education and training reform to better align with population health needs, efforts should include comprehensive focus on appropriate diversification of cadres and skill mix. This includes greater attention to the call for more interprofessional learning for both clinical and community cadres to enable team-based care that can foster service continuum integral for UHC and patient-centered care.(10) 3. Efforts to develop, finance, and deploy clinical cadres and the community workforce should not happen in silos but be integrated as part of comprehensive workforce development. This will require increased focus on the classification of cadres lumped into the community workforce category.(11) Being a predominantly female workforce, greater attention to formalizing the classification of the community workforce and defining their role within the broader health workforce would not only enable greater health impact but also potentially yield a more positive downstream economic impact that warrants greater investigation.(The views expressed in this paper are solely those of the authors and do not necessarily reflect the views of the United States Agency for International Development or the United States Government.)

References
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**Contribution**

Global learning – A New framework for Public Health Capacity Building

We describe a new framework for building Public Health capacity in developing countries to show how education and training models can be transformed to build a fit for purpose health workforce. It involves Information and Communication Technology for online learning, collaboration and networking; a global context for educational content and an international cadre of volunteer tutors; bidirectional learning between and within high and low-income settings, and between tutors and students; a focus on further educational developments; and lifelong learning throughout career progression. We describe experience with the Peoples-university which uses online learning for Public Health capacity building in developing countries and a planned application of this framework in Uganda.

The problem

There is a recognised need to boost the Public Health workforce in Low- to Middle-Income Countries (LMICs) [1,2]. It has been clear for some time that the current higher education model is limited in its ability to respond to needs [3,4]. A number of new models of higher education have been proposed, including those relevant for developing countries [5]. We have previously described our work on building public health capacity in LMICs through e-learning and the use of Open Educational Resources and volunteers [6,7], which has been recognised as an innovation [8]. Building on this experience, we have developed a framework for education transformation through global learning and capacity building.

A Global Learning Framework as a solution

We define global learning as moving away from the traditional model of educating and training the workforce, towards learning in an innovative, integrated and global context, recognising the importance of enhancing skills and capacity through bidirectional learning and shared experiences both between and within LMICs and High Income Countries (HICs). The Information and Communication Technology revolution that allows networked communication and online learning provide essential infrastructure for global learning. We also recognise the need for life-long learning and support for healthcare workers throughout their professional career progression, from students and trainees, to fully qualified staff, specialists and healthcare leaders.

Key components and their features are:

1. Information and Communication Technology: Online learning; best international Open Educational Resources; collaboration and networking across boundaries
2. Global context: Global Health problems covered; volunteer tutors from High Income Countries (HIC) and Low- to middle-income countries (LMIC); costs affordable for LMIC students
3. Bidirectional learning: Learning between and within HIC and LMIC and between...
tutors and students (4) Focus on further educational developments: New content, delivery channels and awards developed during programme, and through new partnerships (5) Lifelong learning though career progression: Appropriate for career stage from starter to leader; engage alumni in education, research and advocacy. An example: Peoples-uni – A model for accelerating capacity building. The Peoples’s Open Access Education Initiative (Peoples-uni http://peoples-uni.org) has been providing low cost online education to help build Public Health capacity among health professionals in developing countries since 2008 [6,7]. Masters-level modules, for Continuing Professional Development or as part of an MPH course, are taught by an international volunteer faculty. Graduates are enrolled in an Alumni group for collaborative research and education and a number have become tutors or Student Support Officers in the programme and are performing collaborative research. A sister site, Peoples-uni Open Online Courses (http://ooc.peoples-uni.org), has been created for self-paced, or facilitated learning in a number of Public Health areas. It is freely available to students and practitioners in any country. An example: applying the framework to Uganda. The Global Health Exchange http://globalhealthexchange.co.uk has been contracted by the UK Tropical Health Education Trust (THET) to create a learning network for Uganda. Learners will be offered open online courses delivered through a web-based platform supported by remote (armchair) volunteers. Feedback on their future learning needs will enable the development of future content and delivery channels. The components of the programme will enable participants to progress on their journey from learner, to practitioner, then trainer and leader. Conclusions: The framework we describe is already in operation to build Public Health capacity in an innovative educational online programme, and for a country-specific initiative. The components and features could be applied in many other settings, and we encourage others to consider this as an innovative educational programme relevant to global health workforce development.

References
**Innovative Financing for Pre-service Education**

New analysis estimates that there will be a shortage of 18 million health workers globally needed to meet the SDGs. Despite significant investments in scaling up health workers made by a variety of developing country governments and donors, the available funding falls grossly short of what is required. Clearly, if the world is to meet its health worker needs, new sources of funding for health worker education need to be found. Below is a summary of the innovative forms of financing:

1. **Alumni**
   - Given the large numbers of alumni that most health professional schools have, even small donations can make a significant difference to a school's funding. Alumni are also an important source of large donations, such as named buildings or endowed chairs. The alumni association of the King Edward VII College of Medicine and Faculties of Medicine of the Universities of Malaya and Singapore has contributed extensively to the development of the alma mater in the form of endowment chairs and fellowship funds. Tapping into alumni as a source of funding requires relatively small investments in alumni affair programs to track alumni and offer programs to engage them in the ongoing life of the school.

2. **Clinical Care**
   - Clinical care can subsidize education, either by subsidizing faculty salaries, purchasing equipment used in clinical teaching, or generating profits that are directly invested in education. In the United States, for example, 87% of graduate medical education is funded directly or indirectly by patient revenues. Even in countries where basic care is free, private “concierge care” or medical tourism can generate funds that subsidize health worker education.

3. **Concessionary Lending**
   - Donors can set up subsidized loan programs to help establish or expand health professional schools. For example, through its Health in Africa program, the IFC offers concessionary loans to schools. Diaspora: The global Diaspora, especially the health Diaspora, are a source of potential investment in health schools. Either large donations from individuals or collected donations from Diaspora organizations such as the Association of Nigerian Physicians in the Americas (ANPA) can be sought. For example, the Garden City Nursing School in rural Ghana was founded completely with the donations of a single Ghanaian from that region. The West African College of Surgeons is another institution that has provided the Diaspora a vehicle through which they can give back to their societies.

4. **Reallocating Existing Educational Funding**
   - Currently many countries spend large sums of money in training health workers overseas. If this money were instead invested in founding health professional schools in-country, the same number of health workers could be trained more efficiently. For
example, Ghana was spending $500,000 per year to train dentists in the UK, of which only 10% returned. The government decided to divert this scholarship funding stream into founding the first dental school within Ghana. The school was started with a total investment cost of $750,000 and has now trained 200 dentists, the majority of which are still practicing in-country. This plan reaped triple benefits: not only was Ghana able to train more dentists more cost-effectively, but they were more familiar with the pathology and resources found in Ghana, and more of them actually practiced in Ghana and contributed to the health of communities. In another example, the government of Botswana spends $2 million a year sending patients to other countries for medical care that could not be received in-country. Now that the government is in the process of founding a medical school, this care can be provided more cost-effectively in-country.

Donations and Endowments: Donations and endowments are large financing contributions to a school. The entire medical school at the University of Chicago, in fact, was established by way of a collection of endowments by a number of donors. Donations tend to be spent immediately whereas endowments are invested to provide permanent income streams to the school. Even in countries with relatively low GDPs, there are wealthy people in-country or Diaspora who are interested in making a permanent and visible contribution to their country. Smaller donors can also be sought via fundraising campaigns. Tapping into the potential of donations and endowments requires having a donor development office. In addition, school board members are often required to make personal donations as well as to engage potential large donors.

Health Insurance Funds: A number of countries have health insurance schemes that are run by the public sector, or in partnership with the private sector. A portion of the revenue from the health insurance industry can be allocated towards the education of health workers who will later contribute towards the health workforce that will staff the delivery arm of the health insurance industry. For example, Medicare in the United States provides 34% of the funding for graduate medical education.

Local Development Funds: The community-based medical schools of the Training for Health Equity for Health Network (THEnet) have had success in persuading local governments to use development funds to fund the foundation of medical schools. The founding of a new medical school in a district capital or rural town has significant implications for job generation, local health, and educational opportunities. In addition, having a medical school and its associated hospital located in their community makes it easier for local leaders to attract other businesses and professionals. The University of Northern Ontario conducted an analysis of the economic impact of the new school on the city in which it was located, and revealed that the province’s investments had been returned threefold. Local funds can also be used for scholarships to send local students to school with grant agreements stipulating a required number of years of return service.

Gifts-in-Kind: Significant contributions can be made to health science schools as gifts-in-kind. Important gifts-in-kind can include land on which to site a school or buildings or access to buildings (for example, using an apartment block as a dorm). Gifts-in-kind can also come from the community, such as community members allowing students to stay in their homes in the absence of dorms. Other gifts-in-kind include faculty time, medical and teaching equipment, etc. For example, at the Amoud Medical School in Somaliland, 35% of the faculty teach as volunteers. Botswana’s first university was founded with the contribution of a single cow from every family in the country.

Student Loans: Because health workers will be some of the top earners in their countries on
graduation, it is quite feasible for them to pay for a portion of their education. Student loans are currently not widely used in developing countries, mainly due to concerns over accountability in repayment. By connecting loan repayment to certification renewal or paying for loans directly out of recipient paychecks, this accountability can be increased and revolving loan funds can be established. Matching Funds: Schools can work with large donors to set up matching funds that challenge other donors to make donations. The matching donations may be made by the universities themselves as an incentive for external organizations to make the original contribution. Donors are attracted to matching funds because it allows them to leverage the funding of other donors and effectively double the impact of their money. Matching funds are good at attracting both large and multiple small donations. CapacityPlus is setting up a matching fund with the Methodist Church to help scale up the production of health workers in Methodist health professional schools in Africa. Microdonations: The relative large sums needed to educate health workers compared to other public health interventions, such as buying a bed net or vaccinating a child, have discouraged small donors. However, through new mechanisms such as GlobalGiving.org, minimum donations of $10 are accepted toward the training of a health worker. This taps into a large pool of small donors and facilitates fundraising via campaigns. For example a single church parish in a developed country, through microdonations, can pay for the education of a nurse. IntraHealth International is currently setting up a program through GlobalGiving.org to accept microdonations for the education of health professionals. Private For-Profit Investors: Although most private medical and nursing schools are nonprofit, an increasing number are for-profit. Such medical schools tap into the funds available from wealthy investors. One example includes St. George’s Medical School in Grenada. This for-profit school was founded by three wealthy investors in 1977. It has now trained more physicians practicing in the US than any other medical school inside or outside the US. Private Foundations. Many private foundations in developing countries as well as developed countries are potential sources of funding, both for capital investments and for student scholarships. European foundations can be found through the European Foundation Center, and North American foundations can be found through CharityNavigator.org. The Rockefeller Foundation, for example, has a long history of financing both capital investments in medical schools and for student scholarships and fellowships. Religious Communities and Institutions. Especially for faith-based schools, religious communities and institutions are a potentially large source of financing. Given their social mission and historical interests in health, many religious communities and institutions are quite willing to invest in the training of health workers. Research Funding: Research funding from external sources such as the US National Institutes for Health or the Welcome Trust can be used to subsidize the salaries of faculty or the stipends of students who engage in research work. In addition, some of the facilities and equipment, such as laboratory space, purchased with research funding can also be used for teaching. Tiered Admission: In order to subsidize their students on school scholarships, many schools such as the medical school in Malawi have started to accept students on a tiered basis. The most qualified students are given full scholarships, and other students who still meet admission criteria are admitted on a self-pay basis. The tuition paid by the self-pay students subsidize the scholarships of the first tier of students. In some cases the second tier of students may be admitted from outside the country, as at the College of Medicine in Malawi. Tuition: For either public or private schools tuition can be a major source
of funding. For private schools, tuition is often the only source of funding whereas in public schools, tuition is supplemented by funding from the Ministry of Health or the Ministry of Education. Tuition tends to have a variety of different sources, including the student’s extended family and income earned by students working as research assistants or in laboratories. Other sources of tuition funding include public and private loans and well as grants from public and private sources. In developing countries, the ability of the extended family to pay for a young person’s education should not be underestimated. Many families have at least one member in who either has access to credit within the country or is a member of the global Diaspora. Such loans within the extended family are often expected to be paid back over time once the student graduates and starts to earn an income.

References

http://www.wisconsinmedicalsociety.org/foundation/support_for_students/scholarships
Submission from the International Federation of Clinical Chemistry and Laboratory Medicine

Introduction:
What is IFCC?
IFCC is the leading global organisation addressing the contribution of laboratory medicine to human healthcare. IFCC has national society Membership in 90 countries and from 46 global laboratory medicine companies. FCC Members represent >40,000 senior laboratory medicine professionals worldwide. IFCC promotes quality in laboratory medicine through science and education.

Laboratory Medicine in Healthcare: Laboratory medicine results support a high percentage of all clinical decisions. Therefore, laboratory medicine is an essential part of the multidisciplinary team at the centre of healthcare. There are >4000 different methods/investigations across clinical chemistry, genetics, haematology, immunology, microbiology and transplantation. Laboratory medicine services vary greatly between the developed and the developing world.

Quality Standards in Laboratory Medicine: Laboratory medicine has been at the forefront of quality standards in healthcare for decades. There is a quality ‘ladder’ that includes internal quality control (IQC); external quality assessment (EQA); and laboratory accreditation against ISO 15189:2012. Quality addresses the pre-analytical, analytical and post-analytical phases of laboratory medicine. The level of quality in laboratory medicine services varies greatly between the developed and the developing world. Education and Training in Laboratory Medicine: Laboratory medicine includes professional staff who are trained in medicine, science and technology. In the developed world all laboratory medicine staff are trained to degree level and many are trained to masters or doctoral level. Trained staff can recommend investigative strategies and interpret results in the patient context. In the developing world medical and scientific professionals may be absent and technologists are poorly trained. Addressing the questions posed by the Expert Group: (1) Conditions needed for investment: Recognition of the central and vital role of laboratory medicine in healthcare is fundamental. It doesn’t matter how expert other health professionals are if they are supplied with poor quality laboratory medicine results then patients receive poor care. (2) Financing health workforce investments: As an essential diagnostic service laboratory medicine depends on both trained staff and modern equipment. Whilst pilot projects may be financed externally sustainable finance for laboratory medicine services must come from national governments and/or the patients that use those services. (3) Social and economic returns: The appropriate use of modern laboratory medicine services can promote wellbeing, early diagnosis and effective treatment. All of the
above have benefits to individual patients and to society. A reduction in the burden of ill-health also has economic returns. (4) Social and economic costs of inaction: Inaction will result in a worsening impact of both communicable and non-communicable disease on society and on the economy. Whilst this will impact on all nations the greatest impact will be on developing countries and the ‘quality gap’ will increase. (5) Imbalances and inequitable distribution: Developing countries require positive action to address the current imbalances and inequities in the quality of laboratory medicine services. (6) Gender sensitive policies: Laboratory medicine is a clinical specialty well suited to women. However, in developing countries cultural factors mean that there are few women in training or in practice. (7) International mobility of health workers: Many developed countries have strict standards for training and regulation of laboratory medicine workers. If those standards are met there is no barrier to international mobility. (8) Education and training model transformation: Curricula for education and training in laboratory medicine are well developed. There is growing recognition of distance learning as the means to deliver this training. (9) Multi-sectoral responses: Several developed countries have developed a multi-sectoral approach to training to give improved clinical context to laboratory medicine.

(10) Strengthen governance: Governance in laboratory medicine is strengthened through the adoption of quality management under the guidance of trained senior staff. (11) Political commitment: Laboratory medicine is not perceived as high profile by politicians. Therefore, it tends to be ignored. Positive messages about the central, vital role need to be reinforced globally. (12) Monitoring and accountability: The long-term goal is to have all clinical laboratories accredited against an international standard (ISO 15189). Achieving that goal in developing countries requires investment in education and training. (13) Advancements in technology: Technology is advancing at a dramatic pace in laboratory medicine. Innovation can lead to faster and better clinical outcomes for individual patients generating savings elsewhere in the healthcare system. The adoption of new technology requires investment.

References
Call to Action for European decision-makers, towards strong health workforces and sustainable health systems around the world. The European Call to Action "A health worker for everyone, everywhere!" was launched in 2014 by the partners of the project "Health workers for all and all for health workers" (HW4All). In an event in Brussels on 9 December 2015, the Call to Action and a list of 175 institutional signatures were handed over to the European Commission. The collection of signatures was closed afterwards. "The world is 7.2 million health workers short. The health worker crisis is one of the biggest threats to global health today, and it is having a particularly detrimental impact on people's fundamental right to health in a number of medium and low-income countries. Europe is part of the problem, because various European countries recruit trained health personnel from abroad, a practice that is unsustainable, increases inequality and further weakens health systems in and outside Europe. Europe could be part of the solution, however, by implementing globally agreed practices for the recruitment of health workers. In 2010, the international community and the World Health Organisation (WHO) framed a roadmap for developing the global health workforce. Called the 'WHO Global Code of Practice on the International Recruitment of Health Personnel' (the Code), it addresses the root causes of migration and brain drain, including health worker training, retention, working conditions and remuneration, financing and rights. Despite this Code, political consensus on the sustainable management of health workforces and of health worker migration at the regional and global level is still a long way off. There are powerful – albeit sometimes short-sighted – conflicting interests, and in many countries austerity measures have put a damper on health expenditures and limited the implementation of policy options. The European Union and its member states must take a firm stance in this debate. As a fundamental element in the social and welfare model that underpins European identity, the existence of a health workforce is a public good that must also be upheld at the global level. The Code should therefore be used as a framework to regulate the pan-regional approach to human resources for health and to strengthen health systems not only in Europe but also globally. We hereby call on European and national decision-makers to show leadership in this issue and to apply a coherent approach to the sector policies currently in place in order to develop and maintain sustainable health workforces both in and outside Europe. This Call to Action provides recommendations to EU institutions and member states in achieving this aim." One call - five recommendations (1) Plan long term and train self-
sustainable health workforces. Planning, forecasting and providing for domestic health workforces without resorting to international recruitment are key to the development of sustainable health workforces globally, and a fundamental step towards reducing brain drain. (2) Invest in the health workforce Public expenditure in the health sector is a necessary investment. It can support health workforce development and has a positive impact on the health of populations, which are to be considered a global public good. It also tends to strengthen countries’ capacity to deal with the impact of the current economic crisis; in fact, investments in health – and in social protection – can accelerate economic recovery. (3) Respect the rights of migrant health workers Health workers have every right to develop professionally and build long-term careers no matter where they live – and that also applies to migrant health workers trained outside Europe. Their presence benefits European health systems and their rights and professional competencies must be valued. (4) Think and act coherently at national, regional and global level Policy coherence with development objectives is a legal obligation enshrined in the Lisbon Treaty. The intersections between migration, health, development cooperation, fiscal and employment policies discussed here must be addressed in a consistent manner, while the impact of policy incoherencies must be redressed. (5) Play your part in Code implementation European actors must take a firm stand in the global health workforce debate, putting the quest for equity in health in all countries front and centre.

References
[1] Full text of HW4All call to action: http://www.healthworkers4all.eu/fileadmin/docs/eu/hw4all_papers/hw4all_CTA_European_booklet.pdf
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**Contribution**

Health Workers for All: Collection of case studies - Practices of WHO Code implementation in Europe: the role of non-governmental actors

Everyone should have access to health workers and functioning health systems, and yet there are still shortages of health personnel throughout the world. This affects far-off countries as well as the European Union (EU). Significant shortages of health workers represent a major threat to otherwise effective health systems. When a country’s demand for health personnel exceeds its own internal supply, a vacuum may be created, leading to migration flows from other countries. This vacuum is not usually influenced by the burden of disease in the country in question. Migration flows commonly move from low-income countries to more affluent countries and regions, where working and living conditions may be more attractive. Migration may exacerbate global imbalances in the distribution of health personnel, while at the same time weakening health systems and amplifying inequities in health. In this context, non-governmental actors in Europe – including health professionals’ organizations, trade unions, NGOs, Universities and local health authorities – are taking steps to implement the public health approach to health workforce mobility promoted by the WHO Global Code of Practice on the International Recruitment of Health Personnel, both autonomously and in collaboration with Governments. The ‘Health Workers for All’ partnership has been involved in documenting this effort in eight European countries, as an indication of the relevance of the Code to actors on the ground. This collection of studies focuses on key areas, such as ‘mobility, migration, recruitment’, ‘planning and forecasting’, ‘rights, working conditions, protection’ and ‘coherence, collaboration, solidarity’. Its aims are to share details of lessons learned, to increase mutual learning, and to spread innovation among stakeholders. These case studies have shown that the Code is already being translated into practical measures in many local and national contexts. These studies also confirm that the multi-stakeholder approach promoted by the Code is key to its implementation. Non-governmental actors are also actively demanding that efforts to implement the Code, which are currently very fragmented, be organized into a system. To this end, a civil society initiative – the Call to Action “A health worker for everyone, everywhere” – is advising policymakers at EU and Member State level to develop and maintain strong health systems and sustainable health workforces both within Europe and elsewhere. The Call to Action – which is being endorsed by an increasing number of institutions – indicates that there is a constituency of non-governmental actors across Europe who are sufficiently committed to the Code to ‘walk the talk’ and to demand that it be implemented in full.

**References**

here: http://www.healthworkers4all.eu/fileadmin/docs/eu/hw4all_papers/case_studiesREADER.pdf
Health workforce shortages and international mobility in the EU‘Health workers for all and all for health workers’ (HW4All) is a civil society-led advocacy initiative involving organizations in Belgium, the UK, Italy, Germany, Poland, Romania, Spain and the Netherlands. Through advocacy and campaigning, it contributes from within Europe to the development of a sustainable health workforce worldwide. With the support of health workers and citizens, it calls upon politicians and policymakers in Europe to implement the WHO Code of Practice on the International Recruitment of Health Personnel (WHO Code). As the WHO states, “the Code aims to establish and promote voluntary principles and practices for the ethical international recruitment of health personnel and to facilitate the strengthening of health systems.” In this sense, it (1) establishes principles and represents a point of reference for a legal framework for the ethical international recruitment of health personnel; (2) provides guidance on bilateral and international legal instruments; and (3) promotes international discussion and cooperation regarding ethical international recruitment with a focus on strengthening health systems in developing countries against the threat of a ‘brain drain’ from those countries. From the perspective of WHO Code implementation from within Europe – and as a complement to work carried out at national level by HW4All partners – this report presents a review of three cross-cutting issues relevant to WHO Code implementation at regional level: (1) HRH planning capacity across the EU: Article 5.4 of the WHO Code recommends that all states should forecast and plan their own health personnel needs and strive to meet them without resorting to international recruitment. Chapter 1 of this report provides an overview of how the European Union is working to achieve this aim and of the tools currently available for this purpose. (2) Fiscal space for health workforces in the context of the economic crisis: Chapter 2 questions the possibility for EU member states to “take effective measures to educate, retain and sustain a health workforce that is appropriate for the specific conditions of each country” (Art 5.4 of the WHO Code) in the context of the austerity measures currently being imposed on many national governments. Fiscal tightening brings with it the risk of restrictions on the capacity to train and retain personnel for future HRH needs, creating a potential for largescale future problems and an increase in the global shortfall. (1) HRH mobility and trade in services: by adopting the perspective of “health in all policies”, Chapter 3 forges the link between the provisions of the WHO Code and the EU’s approach to trade in services, which constitute two different approaches to the international mobility of health
workers. The analysis presented in the following chapters recognizes the fact that the European Union’s mandate on health is limited to supporting, coordinating or supplementing national health policies, while member states remain responsible for the definition of their health policy and the organization and delivery of health services. Equally, however, the EU and its member states have a legal obligation to make their policies coherent with development objectives. The recommendations at the end of each chapter therefore set out strategies for future action leading to a sustainable health workforce. This action is to be taken by HW4All partners and other stakeholders.

References
Submission 37

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Contribution Type: Case study
Question Answered: 9, 10, 11

Contribution: Mobility of Health Professionals in the EU - Ethical Recruitment and Policy Coherence. HW4All event at the European Parliament Brussels, 05 May 2015 – What role can ethical recruitment play for fair distribution of health workers? What role has Europe in ensuring that freedom of movement of health workers in the Single Market does not translate into unequitable access to health services in less affluent regions? These are two of the questions that the event "Mobility of Health Professionals in the EU: Ethical Recruitment and Policy Coherence" that took place on 5 May at the European Parliament responded to. Jointly organised by the Health Workers for All partnership, the European Federation of Public Service Unions EPSU and the European Public Health Alliance EPHA, and hosted by Nessa Childers MEP (S&D, Ireland) at the European Parliament, the event discussed the applicability of the WHO Global Code of Practice on the International Recruitment of Health Personnel in the European context, marked by increased professional mobility. The latter has begun to have a significant adverse impact on health system sustainability due to increasing shortages and maldistribution of doctors, medical specialists and nurses. A phenomenon that is hitting hard in some Southern European countries, but also in Poland, Bulgaria and in particular Romania, where since 2007 several thousand physicians and nurses have received certificates that allow them to work in another European Union (EU) member state. Austerity measures are altering the balance between health workforce investments and mobility, which is at the heart of the WHO Global Code of Practice: new wage imbalances between countries are being shaped and have the potential to further increase health worker brain drain. This means that Member States have to orient their health workforce planning towards self-sufficiency, while EU Cohesion Policy can have a role in supporting countries in retaining their health workers, to avoid mounting health inequalities and safeguard universal access to healthcare. Crucially, what emerged from the debate is that mobility in the healthcare sector is different than in other areas such as IT or construction where the loss of qualified professionals does not pose a danger for public health. Therefore, Health Workers for All issued a Call to European decision-makers in 2014 in support of proper implementation of the ethical principles contained in the WHO Code. “It is about time for policy-makers to realise that investment in public health systems, and in a sustainable health workforce help advance Europe’s economic recovery,” said Linda Mans, global health advocate at Wemos Foundation and HW4All coordinator. “The EU, with its Cohesion Policy instruments, should do a better job to help retain health workers
in their home countries,” Mrs Mans went on to say. In a Europe of increased labour mobility, it becomes even more important to safeguard the rights of workers. “Fair and transparent contracting and equal access to training and career development need to be ensured by employers, who should also go to great length to guarantee a safe and healthy work environment,” added Mathias Maucher, Policy Officer on Health and Social Services at EPSU. Although terms like ‘source’ and ‘destination’ country are becoming blurred in the face of increasingly volatile professional flows, all EU countries must consider how their planning and recruitment practices affect individual decisions both at home and abroad. Both out-migration and reliance on a foreign workforce are indicative of systemic challenges that must be tackled through actions that make working environments more attractive for health workers to stay. “Professional mobility boosts growth and job creation in the Single Market. Yet, in the health sector the playing field is far from level: if you can earn ten times more in another member state while developing your professional skills, it’s hard to resist the call,” concluded Sascha Marschang, EPHA’s Policy Manager for Health Systems.

References
Looking back at the final HW4All event in Brussels, 9 December 2015: Exploring the migration-development nexus - Global health aspects of the implementation of the WHO Code of Practice

On 9 December 2015, the Health Workers for All (HW4All) project and EPHA organised an event on policy coherence for development in the context of the implementation of the WHO Global Code of Practice on the International Recruitment of Health Personnel. The event focused on the impacts of ‘brain drain’ on countries of origin and discussed solutions for sustainability. As a highlight of this final event of the HW4All project, the "European Call to Action" and a list of 175 signatures of European and national key actors were handed over to the representatives of the European Commission.

The event was opened by Dilyana Slavova, President of the Agriculture, Rural Development and the Environment Section in the European Economic and Social Committee (EESC) who deplored the fact that too many health professionals are leaving their country of origin after graduation to take up positions in other countries. She emphasised the urgent need to invest in Human Resources for Health (HRH) to forge sustainable health systems.

The first panel focused on the importance of the WHO Code implementation for public health. Dr Giorgio Cometto (Global Health Workforce Alliance, WHO) presented relevant facts and figures about health workforce mobility and explained their strategy to tackle the estimated shortage of 10 million health workers by 2030. Mr Sascha Marschang (EPHA) stressed that the loss of qualified health workers intensifies already existing health inequalities between richer and poorer countries, and between the global north and the global south. This has big consequences for quality of care, access to healthcare, and treatment and prevention options.

Ms Linda Mans (Wemos Foundation) provided an overview of the work undertaken by the HW4All project and handed over the European Call to Action and a list of signatures to the representatives of the European Commission, explaining that a coherent EU policy response would require commitment at the highest level, crucially also from the Council.

Caroline Hager (DG SANTE) congratulated HW4All on their efforts to raise awareness about the WHO Code at a time of fierce global competition for health workers. She confirmed that she would take the Call to Action forward and continue to work with the WHO and other stakeholders on Code implementation and improved data exchange.

Matthias Reinicke (DG DEVCO) highlighted a number of Commission actions in support of HRH. This work includes DEVCO’s "From brain drain to brain gain" programme and provision of financial support to Ministries of Health.

PANEL DISCUSSION

Professor Alyson
Pollock (Queen Mary University London) opened the panel discussion by emphasising the importance of thinking in a public health paradigm when it comes to discussing health system sustainability. Panel participants: Dr Titilola Banjoko (Foreign Policy Centre & Africa Recruit, UK) Dr Yoswa Dambisya (East, Central and Southern Africa Health Community-ECSA-HC) Koen Demaegd (International Federation of Medical Students’ Associations) Ralph Genetzke (International Centre for Migration Policy Development) Thomas Schwarz (Medicus Mundi International Network) At the end of the event, the hosts and organisers thanked the audience for their active participation and interest in the HW4All project and explained that, although the project was coming to an end in early 2016, the work would be continued and built upon, inter alia, as part of a dedicated Working Group on HRH hosted by Medicus Mundi International.

References


**Submission 39**

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<tr>
<th>Name/Position</th>
<th>Sascha Marschang, Policy Manager for Health Systems</th>
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<td>Organization</td>
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<td>Name</td>
<td>Linda Mans</td>
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<td>The economic crisis has led to increased mobility of health professionals within Europe and in some cases it has even replaced recruitment from non-EU member states, thereby adding a distinctly European dimension to the implementation of the WHO Global Code of Practice on the International Recruitment of Health Personnel. Large numbers of health workers from Southern Europe escaping unemployment and austerity policies are being joined by their peers from Romania, Bulgaria and other EU accession countries where salaries remain extremely low. While the many health professionals opting for either short or long-term spells abroad cannot be blamed – after all, doctors and nurses benefit from automatic recognition of their credentials under the Professional Qualifications Directive, opportunities are easily identified on the Internet, and labour mobility is generally encouraged in the Single Market – the recent surge in mobility is also a sign that something isn’t quite right in Europe’s health systems. On the one hand, there are poor employment and career prospects, low salaries and deteriorating working conditions, while on the other hand we witness significant and persistent vacancies in many destination countries.</td>
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<td>Submission 40</td>
<td>Linda Mans, Senior Global Health Advocate</td>
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<td>Sascha Marschang</td>
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**Contribution**

How Migration affects Health Workforce Management

2015 is the European Year for Development, and one of its key objectives is to raise awareness and foster a broader understanding of policy coherence for development. EYD2015 therefore offers a timely and critical opportunity to imbue both European citizens and those of countries receiving development assistance with a sense of joint responsibility, solidarity and opportunity in a changing — and increasingly interdependent — world. This also includes an understanding of how unsustainable health workforce practices can have a negative global impact. The Ebola crisis in West Africa vividly exposes the dramatic results of exceedingly weak health systems and health workforce shortages: More than 8,600 people have died so far, and it is likely that lives could have been saved had there been more qualified health workers available in the countries hardest hit by the virus. Many thousands of qualified workers from African and Asian countries are working in the United Kingdom or elsewhere in Europe, without any compensation for the poverty-struck countries that trained them. The issue of how to strengthen health systems in developing countries has been taken up by the U.K. House of Common’s International Development Committee.

New and re-emerging infectious diseases affect us all: They do not respect the boundaries of nation states. It is a universal responsibility to address future outbreaks, given that we live in an increased interdependent world. This presupposes a prioritization of policy coherence for development, including the sustainable management of health workforce migration at a global level. Shortages and poor working conditions do not only affect developing countries. Even Germany, dubbed as Europe’s “economic powerhouse,” is experiencing problems in retaining its health workers, with many nurses — and doctors — either leaving the country for better pay and working conditions elsewhere, while many nurses are even leaving the profession. The Health Workers for All case study on the recruitment in Germany of nurses from the Philippines via a bilateral agreement illustrates that — in spite of the World Health Organization Global Code — there is a renewed trend to recruit candidates from outside of Europe. Unfortunately, this often occurs at the expense of improving conditions for the nurses already in the system, by fixing the problem at its roots. The recruitment of Asian and African nurses is therefore the result of worsening working conditions and may act as another “push” for further cuts in wages and labor rights in the German nursing sector. In the specific German-Filipino case however — which could become a good example of ethical international recruitment — it was possible to
avert detrimental consequences. Such an outcome was achieved through a comprehensive agreement that considered the needs of both the country of origin and the destination country, as well as through including the social partners on both sides at the right time in terms of formulating and monitoring the agreement. Health workforce migration intersects with policies in migration, health, development cooperation, economics and employment. It must therefore be addressed in a consistent manner. As underlined by the Health Workers for All project’s “call to action” to European policymakers, action is urgently needed. Europe needs to support low- and middle-income countries — or LMICs — to strengthen (public) health systems and health workforces, primarily by reversing the harmful current trend to contain or reduce development aid for health. The EU and its 28 member states should ensure that 50 percent of aid for health is directed toward strengthening health systems, with 25 percent impacting directly on health workforce training and retention — as recommended by WHO — by channeling funds through national health plans and related health workforce strategies. Moreover, it is becoming increasingly important to “put our own house in order.” The WHO Global Code needs to be properly implemented within Europe too — and national health workforces need to be built up, nurtured and retained. Strong leadership and commitment are required to ensure that these issues firmly remain on the EU and global agenda, but also to warrant that the objectives of EYD2015 — and ultimately policy coherence for development — can be achieved.

References

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<tr>
<th>Name/Position</th>
<th>Gilles Dussault, Professor International Public Health and Biostatistic Unit</th>
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Risks and impacts: Imbalances in the Distribution of Health Workers take various Forms: (1) Between types and levels of services (primary vs hospital services); (2) Between occupational groups (physicians vs other occupations); (3) Within occupational groups between specialties (internal medicine vs mental health and general practice); (4) And between geographical areas (urban, rich areas vs rural, isolated, poor areas) As a result, some populations have inadequate access to health workers whose services they need. Moreover, imbalances in the health workforce have a detrimental effect on working conditions and may contribute to high turnover and decreased morale among health professionals, making a bad situation worse. A more balanced distribution of health workers will improve access to health workers, working conditions and attrition rates and contribute to achieving universal health coverage. Solutions to mitigate the risks and impacts:

We summarise key findings from a study funded by the European Union, which focussed on recruitment and retention of health workers in Europe, driven by the recognition that improved access to care could only be assured with effective retention policies. The study concentrated on identifying “what works” and was framed by the 2010 WHO recommendations on improving access to health workers through improved retention (WHO 2010). The study focused on European countries; three non-European countries were also studied (Australia, Brazil, South-Africa). Responses to recruitment and retention problems show great variation between countries. The most common interventions are the following: (1) Education: Adjust the content, structure, pedagogy (e.g. early exposure, tutorship, mentorship, fieldwork) and the length of the curriculum to attract more recruits into particular occupational groups or specific understaffed areas. (2) Give access to training and job opportunities in healthcare to young people from deprived areas and the unemployed. These benefit both the participants and the healthcare sector struggling with staff shortages. (3) Geographical decentralization of education institutions and programs regulation: revise scopes of practice of healthcare professionals, e.g. extend current roles and enable task substitution to increase attractiveness of a profession (e.g. via nurse prescribing) (4) Financial Incentives: scholarships, free tuition, education allowances, better compensation, remuneration adjusted to working conditions,
additional benefits such as housing or transport allowances. Professional and Personal Support: Improve working conditions and environment, including scheduling, career progression, and better line management and supervision. Tailor working conditions to individual employees’ life stages (e.g. child care support for employees with young children, the ageing workforce, etc.) Support the physical and emotional wellbeing of workers. What works? A critical limitation in examining the effectiveness of interventions is that none had been fully or independently evaluated. This does not mean that no lessons can be learned. Key ones are the following: (1) No “one size fits all” solution but good practices can inform policy-makers and planners who can adapt them to their context. (2) Single interventions have a limited effect e.g. financial incentives alone have little effect. (3) Bundled measures designed and implemented for specific target group (future students, medical interns, older workers, etc.) have a higher chance of success. (4) The success of recruitment and retention interventions is underpinned by active engagement and involvement of stakeholders from the design through to implementation and monitoring and evaluation. These conclusions are consistent the academic literature.

Recommendations: In order to support countries in balancing and making the distribution of health workers equitable, we recommend to: (1) Create a repository of recruitment and retention good practices to inform policy-makers in support of advancing UHC through cross country exchange and learning, (2) Promote and disseminate monitoring and evaluation toolkits, including sets of standard indicators that countries can use as a reference for the development of their own strategies; (3) Support research and development in the funding of recruitment and retention, particularly the evaluation of the effectiveness of interventions and the development of innovative practices. Conclusion: Tackling recruitment and retention requires both short-term action and longer term planning. The good practices outlined here highlight key factors to optimize success. Technical and managerial capacity is key for successful staff retention. Patients deserve access to high quality care from a well-qualified workforce. Equally, health workers deserve to work in well-supported environments, with staffing levels that promote safe, high quality care.

References
[4] Jeni Bremner (European Health Management Association), Isabel Craveiro (Instituto de Higiene e Medicina Tropical, Lisbon), Marjolein Dieleman (Royal Tropical Institute, Amsterdam), Anne Marie Rafferty (King’s College London), Walter Sermeus (KU Leuven).
Macao (Macau) is a developed tiny economy, and the GDP per capita was $96,038.1 (current US$) in 2014, ranking the fourth in the world. The supply of health and social welfare workforce could not meet the need of the residents with the aging of population. The population in 2015 was 646.8 thousand, with 9.0% aged over 65. While according to Macao Population Projection, the aging rate will be 20.7% in 2036 with a total population of 759.9 thousand. Although the number of doctors and nurses has been increasing in the past years, yet doctors and nurses per 1,000 people were only 2.5 and 3.1, with very slow increase in recent years. According to a survey carried out by Kiang Wu Nursing College of Macao, there was a shortage of about 20% nurses in 2005. And if the number of nurses per 1,000 people increases to 4 as the Health Bureau hoped, forecast showed that there should be about 2,337-2,450 nurses in 2015 and 2,491-2,770 in 2020. The actual numbers were lagged behind with only 1,592 doctors and 1,990 nurses in 2014. At the same time, the potential supply of health and welfare workforce is far from adequate. According to data from Tertiary Education Services Office, only about 10% local students registered in related programs home and abroad. Especially, only 12 studying at Macao in 2014/2015 and 54 studying outside of Macao in 2013/2014 were doctorate candidates. Since formal education is the most important way to cultivate doctors and nurses, it can be predicted that workforce in the health and social welfare industry will be far from enough in the future. Most importantly, surveys showed that students both at high schools and colleges chose to study and be devoted to business or social sciences instead of science. The most important reason may lie in the belief that science is more specialized, difficult and time-consuming than social science. Secondly, business and social sciences are believed to be more useful since presently the dominant industry in Macao is gaming industry, followed by hotels, restaurants and similar activities and wholesale and retail trade industries. Thirdly, the most attractive occupation is civil service, which is closely related to social sciences. Fourthly, the unemployment rate of Macao is very low (about 1.9% in 2015) and it is so easy for Macao residents to find a satisfactory job that many residents would prefer starting work early to spending much time in receiving education. How could this problem be solved? In the first place, “the invisible hand” of the market may help to solve this problem. With the increasing demand of health and social welfare workforce, the average salary of this industry will increase so as to attract more residents to receive related education and be devoted to this industry. With the slow-down of the development of gaming industry since 2014, it has become a not-so-promising industry. This may explain why, compared to 2013, not so many graduates chose gaming industry and more preferred health and welfare programs in 2015. In the second place, the government may help to increase health and welfare workforce. Firstly, the
government may issue yearly information to the public about the short-run and long-run supply and demand of workforce in different industries, which may help the residents to adjust their choices timely. Secondly, the government may help to improve the quality of primary and secondary education in such subjects as mathematics and chemistry, which may increase the possibility of the students to continue their study in the field of health. Thirdly, as for higher education, Kiang Wu Nursing College of Macao is regarded to be good at training nurses. While cooperation with international institutions to train doctors might be a good choice for Macao. Fourthly, the government may attract non-residents to work as doctors or nurses, since shortage of workforce is a problem facing almost every industry in Macao. This is an effective practice of Macao in the past years, although not favored by most Macao residents.

References
To whom it may concern,

We, the International Federation of Medical Students’ Associations, representing 1.3 million medical students worldwide and as part of the future health workforce, welcome the newly established High-Level commission on Health Employment and Growth. Ensuring health for all is a fundamental human right. Yet, without a health workforce in the proper quantity, quality and distribution, universal health coverage cannot be accomplished. Through this essay, we would like to express our call to action in the area of imbalances and inequitable distribution of health workers, and international mobility, in order to preserve the right to health and healthcare for all people. Over 1 billion people worldwide lack access to quality health services. [1] Estimates from WHO and World Bank identify one of the major challenges to attaining universal health coverage is the projected global deficit of 18 million health workers by 2030. [2] Imbalances in distribution of health workers goes beyond numbers of workers trained. It addresses issues related to health workforce planning in numbers of workers in specialization (such as general practitioners) is adjusted to the specific needs of the population, as well as the entries to medical school, the number of health workers choosing to work in rural or urban areas, or choosing to practice abroad. Governments have the responsibility to use public funding in ways it best serves our communities, just as much as health workers are socially accountable. However, often not enough attention is brought to motives behind work choices: social and economic conditions are some of the main determinants of the lack of retention of health workers in areas they are most needed. [3] By not ensuring proper, safe, academically and financially stimulating working environments, workers may decide to move to urban areas or other countries. Increasing working hours to dangerous levels to compensate reduced workforce threatens patient safety and increases the burden on the remaining workforce even further. According to the Article 13 of the Universal Declaration of Human Rights, everyone has the right to freedom of movement and residence within the borders of each state and everyone has the right to leave any country, including his own, and to return. [4] Health workforce migration will continue to impact both medical education and national healthcare delivery. Therefore, we must put efforts towards creating the proper working and learning conditions to ensure retention, as well as mitigate negative effects, as changes in health workforce can affect regions directly. [5] Of the 57 countries with “critical” shortages and misdistribution of health workers, 36 are in Sub-Saharan Africa, 6 are in South-East Asia and 5 are in Latin America and the Caribbean. [6] It is fundamental to follow the recommendations of the WHO Global Code of Practice on the International Recruitment of Health Personnel in such a way that the problems related to migration can be reduced. [7] Governments should make the Code a core component of bilateral, national,
regional and global responses to the challenges of health personnel migration and health systems strengthening and support the HRH Global Strategy 2030. Health workforce planning and forecasting must be based on data collected on current workforce trends, as well as predicted trends in workforce requirements. To implement these plans, governments must expand regional and national observatories on the health workforce, to further understand population needs, recruitment, retention, as well as health workforce migration between countries. [8] To achieve the health workforce we need and that our communities deserve, we need international strategies and national implementation. Today, we as the future health workforce commit to our responsibilities to positively impact the communities we serve and will serve in the future. We look forward to the Commission’s efforts and actions towards these vital issues of national and international interest. Yours sincerely, The International Federation of Medical Students’ Associations.

References

[1] World Health Organization (2011). Transformative scale-up of health professional education: an effort to increase the numbers of health professionals and to strengthen their impact on population health


United Nations (1948) The Universal Declaration of Human Rights


To whom it may concern,

We, the International Federation of Medical Students’ Associations, representing 1.3 million students worldwide and as part of the future health workforce, welcome the newly established High-Level commission on Health Employment and Growth. Ensuring health for all is a fundamental human right and one of our world’s highest priorities. Yet, without a health workforce in the proper quantity, quality and distribution, universal health coverage cannot be accomplished. Through this essay, we would like to express our call to action in the area of transforming education and training models, in order to positively impact the communities we serve, and to ensure that we preserve the right to health and healthcare for all people. Solely increasing the number of health professionals graduating is not sufficient to solve the workforce crises. The shortage of professional workers is compounded by the fact that their skills, competencies and expectations are often poorly suited to needs of populations they serve. [9][10] We are observing a rapid and uncontrolled increase in the number of medical schools globally not accredited according to international standards. The importance of international standards in medical education in improving the quality of healthcare is recognized as fundamental globally. [12][13] However, regulatory mechanisms are rarely standardized and inconsistently applied. [14] Safeguarding education quality faces severe challenges, such as academic institutions lacking infrastructure and equipment or staff, or practice static and fragmented educational methods. [15] When numbers of entries to medical schools increases, it is essential that quality of education is never compromised. [16] There must be quality assurance systems for education and training, including accreditation and indicators of progress and monitoring. [17] We call upon governments to urge academic institutions to follow the World Federation for Medical Education and WHO Global Standards in Medical Education. Health workers need to be accompanied by a set of skills, knowledge and competencies that serves today’s globalizing, interconnected and rapidly changing world. Workers should be provided with continuous professional development to keep their skills to appropriate levels after graduation. [18] Medical Education institutions should provide transformative medical education to support the scaling up of health workers which are community-, competency- and team-based. [19] Excessive focus on hospital-based education and education segregated into professional silos do no longer prepare health professionals for 21st century health services. [20] IFMSA upholds the principles in the WHO Transformative Education Guidelines, and calls medical schools to orient education to an interprofessional and patient-centered perspective. We call on medical schools to transform curricula to follow outcome-based and competency-based models, as well as to uphold the principles in educational strategies in curriculum as formulated through the SPICES-model: student-centred, problem-
based, integrated, community-based, elective-driven and systematic. [21] As mobility remains a fact, and as students’ experience, skills, knowledge and values must be synchronized with the situations and populations they will face after graduation, academic institutions worldwide simultaneously must reflect international aspects of medical practice. Undergraduate global health teaching, as well as intra-curricular mobility and internationalization opportunities, have seen significant growth over the past years, partially as a response to student demand and partially due to increasing globalization, cross-border movement of pathogens and international migration of health care workers. [22] Medical schools worldwide have an obligation to be transparent of the content of the educational programme towards society and to provide readable and comparable degrees. [23][24] We believe that the implementation of the Global Consensus on Social Accountability for Medical Schools will remain a valuable tool to ensure education responds to current and future health needs and challenges in society, education, research and service priorities are reoriented accordingly, governance and partnerships with all stakeholders are strengthened, and evaluation and accreditation is used to assess performance and impact. Through research done in medical education centers, as well as through offering Faculty Development programmes, we call to ensure progression of education and teaching methods. [25][26] IFMSA believes in a world in which all medical students unite for global health and are equipped with the knowledge, skills and values to take on health leadership roles locally and globally. To ensure the highest possible outcomes for the communities we serve, IFMSA commits to promote these principles in medical education to all major stakeholders, and considers the involvement of students in the all processes crucial. Today, we as the future health workforce commit to our responsibilities to positively impact the communities we serve and will serve in the future. We look forward to the Commission’s efforts and actions towards these vital issues of national and international interest. Sincerely, The International Federation of Medical Students’ Associations.

References


To whom it may concern,

We, the International Federation of Medical Students’ Associations, representing 1.3 million medical students worldwide and as part of the future health workforce, welcome the newly established High-Level Commission on Health Employment and Growth. Ensuring health for all is a fundamental human right and one of our world’s highest priorities. Yet, without a health workforce in the proper quantity, quality and distribution, universal health coverage cannot be accomplished. Through this essay, we would like to express our call to action in the area of multi-sectoral responses to health workforce planning and the creation of political commitment, in order to positively impact the communities we serve, and to ensure that we preserve the right to health and healthcare for all people. Over 1 billion people worldwide lack access to quality health services. [27] Estimates from WHO and World Bank identify one of the major challenges to attaining universal health coverage is the projected global deficit of 18 million health workers by 2030. [28] However, we believe that a comprehensive, integrated and multi-sectoral response is crucial to prevent this from becoming reality mitigate the negative effects. The World Health Report 2006 presents a technical framework to support countries to resolve problems underlying the health workforce crises, and itself was developed by representatives of multilateral agencies, donors, partner countries, nongovernmental organizations and the academic community. [29] The components of the health workforce framework holds 6 defined key components: policy, health workforce management, finance, education, partnerships and leadership. We call for local, regional and international organizations concerned with health care delivery to build partnerships aligned with the health workforce plans and policies of the countries in which they operate. Governments need to set out a clear vision for their respective health workforce, with short-, medium- and long term actions and goals. This must include collaboration with health students, health ministers, education ministers, finance ministers, academic institutions, patient organizations and labor and civil service sectors, and should also include collaboration with national and international bodies, as well as public-private partnerships. By involving all relevant stakeholders, not only will the implementation of recommendations be supported and become part of a broader collaboration with a common goal, it can also supply new and otherwise missed insights, both during data collection as well as during implementation and evaluation. We want to address specifically the inclusion of young people in health workforce planning. Young people make up for an increasing part of the world population. Around 1.8 billion people are between the ages of 10 and 24, who will be the shapers and leaders of our future. Meaningful youth engagement takes place when youth are involved in planning and decision making in processes that affect themselves and others, and happens in youth-adult partnerships.
Youth engagement offers community leaders the expertise and partnership of young people, can help current decision makers understand the unique perspective of understanding the direct implications of policies on a local level. Additionally, young people themselves benefit by gaining skills, knowledge and connectedness, as they will ultimately be the leaders of the future. Including young people in the discussions of our future health workforce today, will reinforce their commitment to the decisions taken by the time they are in charge. The WHO has also called for appropriate investment in human resources for health in order to achieve Universal Health Coverage in all of its member states.

[30] Commitment of all sectors, including government and key partners such as civil society, is necessary to implement the commission’s recommendations. The inclusion of civil society will ensure them becoming part of the solution, as well as their empowerment will be able to lead to holding governments accountable for their actions during the implementation. Today, we as the future health workforce commit to our responsibilities to positively impact the communities we serve and will serve in the future. We look forward to the Commission’s efforts and actions towards these vital issues of national and international interest. Yours sincerely, The International Federation of Medical Students’ Associations.

References
A powerful body of research evidence exists in relation to the contribution of the Registered Nurse (RN) to patient outcomes and safety (see separate ICN Evidence submission). It follows that there will be both human and economic costs as a consequence of dilute RN skill mix. For example, increased readmission rates, longer length of stay, higher RN turnover and sickness rates. It is highly probable that reducing RN numbers in both employment and training as some countries have done as part of cost containment programmes is a false economy. Further research to quantify the extent of these costs at organisational and country level is required. The absence of such work is symptomatic of the relative invisibility of nursing costs in health payment systems. Some countries have sought to substitute registered nurses with other grades of health workers or develop new cadres. Recent work by Griffiths and Ball also identifies the critical relationship between safety and RN staffing levels but found no evidence that higher numbers of Health Care Support Workers reduced mortality. Workforce growth must be the right growth and getting care right first time is not only good for patients but also the cost effectiveness and productivity of healthcare systems. Health workforce growth strategies must consider the overall shape of the workforce, take account of supervision, delegation and accountability processes and be cautious about simplistic substitution solutions. Appropriate regulation is also required to safeguard public protection and prevent workforce exploitation. As the largest healthcare profession Nursing is a powerhouse for change, innovation and leading new ways of working. Extended and advanced nursing roles such as Nurse Practitioners and Specialist Nurses in both primary and secondary care are frequently the lead clinicians supporting patients with chronic and long term conditions and also the first point of contact. Patient outcomes and satisfaction rates are comparable with medical practitioners however there is likely to be potential for cost savings. Clear career pathways and development support for these nursing roles can be a significant solution to meeting the care challenges of an ageing population. Increasing numbers of countries are now introducing nurse prescribing which is a significant enabler of change. Equally nursing roles in public health and prevention that reach deep into communities and frequently work alongside organisations supporting the wider social determinants of health such as housing and education should be supported. In addition to social and economic independence and advancement investment in education for girls and women also supports wealth creation and improved health outcomes. International research led by Kings College London found that every 10% increase in bachelor’s degrees was associated with a decrease in the likelihood of a patient dying by 7%. The vision for developing health systems in many countries is similar i.e. more care in the community, improved prevention, mental health and palliative care. However workforce planning is frequently disconnected from health services.
planning. Enhanced co-ordination and integration between workforce and health service policy is crucial to ensure the right numbers of staff with the right skills and in the right location. Like the general population the nursing workforce is ageing and retention is as important as recruitment. Improved and co-ordinated workforce data and HR approaches including flexible working arrangements, continuing professional development and good staff engagement and communication are crucial. Cutting and restraining pay is unsustainable and recruitment from overseas and via Agency’s are the costly consequences of weak planning and HR strategies. Progress against the WHO principle of self-sufficiency should be closely monitored and publicly reported on. The current mantra from some Political leaders is that high quality health care is only possible if the economy is thriving. Physical and mental health is not subservient to economic health but rather an equal partner. Investment in health supports and drives economic growth and this mutual dependence should be stated publicly. This is an important message of value and recognition to frontline healthcare staff who on a daily basis are working to give of their best to patients in very challenging environments.

References


Rafferty et al. demonstrated that patients in hospitals with the most favourable staffing levels (the lowest patient to nurse ratios) had lower mortality. Lower hospital acquired infection rates, fewer falls, lower failure to rescue rates, fewer medicine errors and better patient experience have all been associated with richer Registered Nurse skill mix. In addition Aiken et al. have identified that improved retention, lower absence, stress, illness and burnout rates as well as higher morale were associated with improved work environments and reduced patient to nurse ratios. Registered Nurse staffing levels are associated with both improved patient safety and outcomes and the health and wellbeing of the nursing workforce. In 2009-2010, 453 British Heart Foundation Specialist nurses saw a total of 111,645 patients, made 171,449 telephone calls to patients, delivered 9,658 teaching sessions contributing to 8,438 fewer hospital admissions through nurse-led interventions. They saw patients in their own home and in clinics to monitor their conditions, adjust their medication doses and provide information and support. The nurses used a variety of care models: outpatient clinics, home visits, and tele-monitoring. An evaluation of the programme demonstrated that heart failure nurses reduced all-cause admissions by an average of 35 percent, and an average saving of £1,826 per patient was gained after the costs of the nurses had been deducted. The significant improvements in quality of life and physical health has resulted in heart failure specialist nurses becoming the linchpin of co-ordinated multidisciplinary community services to patients with heart failure. StreetMed is a nurse-led team providing healthcare services to the homeless in London. During 2013/14, StreetMed’s successes included increasing the number of patients registered with a GP and reducing the percentage of rough sleepers or those without secure accommodation The nurses have also improved early identification of palliative care needs and homeless patients’ access to palliative care services; reduced emergency department attendance; and helped patients to access a range of services, including prescribed methadone; a planned detoxification service; and social and mental health services. Lesley is a nephrology nurse practitioner in Australia who manages pre and post-end stage kidney disease and chronic disease in Aboriginal and non-Aboriginal people across urban and rural settings. Lesley and her team holistically assess the physical, mental and social impact of chronic diseases and treatment on the patients. Lesley provides holistic care and has the added advantage of having advanced clinical skills. She assesses patients to make a diagnosis and implements a pharmaceutical or non-pharmaceutical management and treatment plan. Lesley has diagnosed many new cases of hypertension, diabetes and potential renal disease and has seen good success in chronic care in her community. The programme is to be expanded to include a diabetic nurse practitioner and a cardiac nurse practitioner which will strengthen the chronic
care model. In South Africa nurses work as clinic managers and practitioners at township clinics that are visited by 200 to 300 patients daily. They supervise staff including junior nurses, health promoters and volunteers. Nurses take histories and perform physical examinations, and if there is no physician, they provide comprehensive care, including prescribing medications. On scheduled days nurses travel in a specially equipped van to take health care to the people thus increasing access to populations. As a registered public health nurse with the Nurse-Family Partnership (NFP) programme in Colorado, USA, Rita visits the homes of first-time, low-income mothers, many of whom are still teenagers. She works intensively with these mothers to improve maternal, prenatal and early childhood health and well-being. A recent study of the programmes’ outcomes showed a reduction of pre-term and low-birthweight babies, improved parenting and home environments, reduced quickly recurring and unintended pregnancies, increased participation in the workforce, and reduced incidence of conduct disorders, involvement in crime, and delinquency.

References


The digital revolution is gradually transforming our society. Technology is becoming very cheap, making it pervasive to people and enterprises. It also appears to be seriously threatening employment, like previous technology revolutions [1-2]. Examples call centers that substitutes the sales force or eBanking that is removing banks from the high street. Internet of Things (IoT) is bridging the gap between the physical world and its representation within the digital world [3]. In healthcare, IoT is integrating of what forms the life of people into software applications, leveraging benefits in healthcare services by combining wireless sensor networks, beacons, radio-frequency identification (RFID), data processing, security, etc. What will be the effects of digitalization on employment in healthcare? Two opposing ideas are dominating: (1) the skeptical forecasts unemployment resulting from the ensuing reorganization of services [4-5]; (2) the optimist one sees economic gains and an expanded employment market resulting from the eHealth revolution [6] and from beneficial effects of interactive eHealth systems, eHealth services implementation will require adjustments in the organization of services and in the workforce that delivers them [7-9]. Depending on the type of service it will imply reductions or more need of healthcare professionals. A broader use of “store-and-forward” service involves typically the acquisition of clinical data (i.e. biosignals, medical images, etc.) and the transmission of this data. It has the potential to significantly optimize the access and use of diagnostic technologies to an extent that it could eventually reduce (e.g. with automatic systems) significantly the number of professionals needed to deliver these services. On the other hand, “remote monitoring” that enables health professionals to monitor a patient at a distance using various technological devices (i.e., Ambient Assisted Living (AAL), telenursing, telepharmacy, etc.) is creating new types of services that will require more professionals, with new skills to respond to demand, such as in clinical informatics, health data analysis, AAL maintenance, and new medical and nursing specialties. “Interactive eHealth” services provide real-time interactions between patient and provider. In their most simple form, they include (mobile) phone or skype consultations, online communication and even home care,. At a more complex level, they may be used for teletriage, specialist consultations, teletrauma, remote therapy, robotic surgery. By optimizing the use of human resources, they may reduce the need for more professionals in specific contexts. But they can also expand the healthcare market and reach more distant patients.
and create an increased demand for health professionals. Technological change allegedly eliminates routine labor, whether physical or cognitive, and it increases demand for non-routine work typically requiring additional education [6]. The impacts of digitization are much more profound and raise many questions that require more research: which new professions are needed (e.g. the “Nursing data manager”?) and what changes on the general health professions will digitization will force? What new organizations and business models are necessary to address the changing healthcare demand? Will physicians be using more sophisticated decision support systems and would this use reduce, or increase, the number of health professionals required to respond to demand for services? These questions require more evidence-based answers in order to adequately respond to global health workforce challenges [10]. Overall, it is not clear what will be the impact of digital technology on heath workforce. There are areas where eHealth services will eliminate the need for health workers and others that will demand more health professionals, even promoting the emergence of new professions. There is an opportunity for introducing innovative patient management services, supported by new Information Systems that would allow more effective relationship with patients. The design of a strategy to finance these services will be vital for their sustainability. eHealth services are expected, as in the banking or in the music business, to be an effective way to bring change into the organization of services, in management processes, in skill-mix, staff education and training; and in pay and reward systems [10-12]. However, there is still a lot to learn on how to overcome the barriers that limit this process of change, particularly because most organizations are not aware and are not prepared to tackle the challenge of digitalization of healthcare services.

References

Merck is a leading science and technology company in healthcare, life science and performance materials. As the oldest pharmaceutical and chemical company in the world, founded in 1668, we have developed countless innovations that improve people’s lives. Unfortunately, millions of people still do not have access to health innovations in developing countries (1). We are committed to improving sustainable access to high quality health solutions for underserved populations regardless of their ability to pay or geographic location. We recognize that access is a complex and multi-faceted challenge with no one-size-fits all solutions and tailor our programs and initiatives to global, regional and local needs. We realize that we cannot work alone to address all the access gaps and that partnerships, collaboration and dialogue are key to delivering sustainable access solutions. We leverage our expertise, experience and competencies across the health value chain and across our businesses through our access to health (A2H) approach, known as the “4As Framework”: Availability, Affordability, Awareness and Accessibility. We believe health workforce capacity and training are a major barrier to access and not adequately and sufficiently prioritized, yet constitute a critical opportunity for sustainable and impactful health systems strengthening. Achieving this goal requires a multi-stakeholder collaborative approach. We commit, through our awareness and health empowerment programs and initiatives, to contribute to this goal by providing private and public health workers, patients and stakeholders with the information, tools, knowledge and skills to make informed health decisions. Indeed, health empowerment facilitates “awareness of the ability to participate knowingly in health and healthcare decisions.” (2) Our comprehensive and holistic approach towards health empowerment is aligned with the WHO Human Resources for Health (HRH) Workforce Strategy: 2030. We believe that available, accessible and well-trained health workers are central to strengthening health systems and improving health outcomes. Our approach is also aligned with the UN Sustainable Development Goals (SDGs). We believe that only by integrating the three dimensions of sustainable development (economic, social and environmental) will it be possible to achieve the transformative change needed to secure long-term human and environmental well-being. As we enter the post 2015 SDG era, we are looking beyond our industry towards new and transformational partnerships and break away from siloed and vertical thinking. We are committed to working in partnership with diverse stakeholders both within and outside the healthcare sector. Examples of our cross-sectoral approach to health empowerment include:
(1) SDG 3 (Health) Merck Global Medical Education: We support independent and continuing medical education programs and fellowships to address unmet needs in medical education. Our programs focus on oncology, immuno-oncology, fertility, multiple sclerosis, cardiology, endocrinology and metabolism, including thyroid and type II diabetes. These programs are delivered at a worldwide level.

(2) SDG 2 (Nutrition) Su-Swastha: The project aims to increase access to suitable, quality healthcare products at affordable prices and to empower patients in Indian rural areas through advocacy and awareness where there is a shortage of specialists, doctors and surgical services.

(3) SDG 6 (Water & Sanitation) Merck Life Science partnership with West Bengal Public Health Engineering Department (PHED): This partnership addresses contaminated groundwater, the main source of drinking water in West Bengal. As a trusted technology provider in water quality monitoring, Merck has set up laboratories for PHED, designed lab requirements, and offered support through in-house training and awareness seminars to local lab workers. Health has long been recognized as a critical enabler for social and economic development. (3) Supporting the development of the health workforce is a smart investment and governments should allocate resources. Private sector stands ready to support these efforts. However, we notice that there is no private sector representative on the High Level Commission. We believe that only through the inclusion of all stakeholders can we achieve the change we seek. As we move forward with the SDG agenda and the WHO HRH Workforce strategy, we call for:

1. All stakeholders, both public and private, to be included and held responsible and accountable to ensure progress and impact.
2. A step-wise approach and a built-in monitoring and evaluation system, including identification of key targets, objectives milestones in the short, medium and long-term.
3. Avoid “pilotitis” and work to scale-up and replicate identified best practices.
4. Great progress has been achieved under the Millennium Development Goals (MDGs) and it is important to leverage these lessons learned for the future health workforce.

References

Research proposal: Can the experience of General Practitioners in Europe strengthen health systems in urban Sub-Saharan Africa?

Background: Universal health coverage and access to quality health care for all people are highly relevant on the 2030 Agenda for Sustainable Development (1). Access to quality health care in developed countries is provided by strong primary health care systems. At their cores work highly trained doctors: General Practitioners/ Family Physicians (2-14). Could this successful concept help to strengthen health systems in Sub-Saharan Africa? Within different European countries contemporary General Practitioners have common features: Family Physicians have comprehensive knowledge based on evidence and experience (13-18). In the health system they provide equitable access, guidance and coordination for all people (13-28). They integrate their patients’ different medical, psychological and social concerns (13-16,18, 29). Being their patients’ primary and ongoing medical advisor, they represent proximity and continuity (13-17,23,30). Family Physicians also stand for values as professionalism (31,32), trust (13,14,30) and leadership (2,14,33).Sub-Saharan Africa has the highest shortage of qualified health workers worldwide (34). In the past various concepts were developed to address the lack of human resources in primary health care. Following the Conference of Alma Ata medical assistants and community health workers were trained. A few African countries tried to establish Family Physicians (35-40). Recently the concept of Task Shifting was introduced, where greater responsibility is given to a lesser qualified health worker (41). Various epidemics, the epidemiological transition, the issue of quality assurance in health care and the demands of a growing middle class additionally contribute to the question: What is the appropriate primary health care workforce in Sub-Saharan Africa? There is a need to generate more evidence (42-45). Methods Aim: To generate evidence, whether training and support of physicians that work in primary care in urban Sub-Saharan Africa, according to the features of contemporary European General Practitioners, improve the health of the target population. Objectives: a) To investigate what training and support the physicians need through a qualitative study.b) To train and support primary care physicians within a cluster randomised controlled trial. c) To measure improvements of health outcomes of the target population. Study setting: a large city in Sub-Saharan Africa. Study population: primary care physicians; stratified random selection by urban districts of different socio-economic background. Target population: patients
attending the primary care physicians. Qualitative Study: Assessment of the study physicians’ requirements for training and support through questionnaires, focus groups and in-depth interviews; the analysis of the qualitative study, the features of European General Practitioners and the health care needs of the target population are the base for the training and support activities of the subsequent randomised controlled trial. Cluster Randomised Controlled Trial: Following the qualitative study, the physicians will be allocated into intervention and control group by stratified randomisation. The intervention group will receive training and support for 18 months. This will be provided by permanent General Practitioner (GP) trainers and additional volunteer European GP trainers. In both groups, outcome indicators will be measured by volunteer European GP observers before and after the intervention. Primary Outcome Indicators: Secondary Outcome Indicators: Number of patients treated Knowledge of physicians, Fraction of poor patients treated, Satisfaction of patients, Facility based deliveries, Children adequately vaccinated, Fever appropriately managed, Hypertension correctly managed, Patients with HIV treated, Adequate referrals, and Discussion. This research proposal directly refers to the Sustainable Development Goals 3 (Good Health and Well-Being), 4 (Quality Education) and 17 (Partnership for the Goals). It generates urgently needed evidence about the primary health care workforce in Sub-Saharan Africa and builds on existing resources. It contributes to connect vertical and horizontal service delivery. It makes use of proven features of European General Practitioners and considers the needs of African primary care physicians and their patients. It has to be considered that the assumptions of this approach can be wrong, as African patients may be unwilling or unable to use European style General Practitioners because of cultural or financial reasons. Strengthening primary care physicians in Sub-Saharan Africa also depends on adequate political support, as the effectiveness of Family Medicine is reduced by bad work conditions, weak professional governance or inadequate financing. However, if successful this research proposal will contribute to the improvement of population health. It will also contribute to the creation of health employment, as the trained primary care physicians require support staff. The approach then could also be tried in rural areas. In addition this study may initiate further research in economic and social sciences.

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Non-discrimination is a core human rights principle and obligation, found in international and national laws, and in national constitutions. Despite this, discrimination in health-care settings, particularly against marginalized and most affected populations, remains widespread and takes many forms [1]. Discrimination leads to poor health outcomes because it discourages continued access to care, thus, hampering efforts to achieve the Sustainable Development Goals, particularly Goal 3, which is premised largely on improving efforts to ensure Universal Health Coverage, to end the AIDS epidemic and achieve health lives for all [2]. Evidence also shows that lack of access to health care, which includes lack of access to sexual and reproductive health care because of discrimination, can represent a significant cost burden to economies as a whole, including the health care sector[3]. On the other hand, the direct cost benefits of ensuring such access are dramatic, including costs averted from reducing the transmission of HIV and averting healthy years of life lost due to disability and premature death [4]. Studies have documented serious disruptions in the availability of and access to HIV and other health services following widely publicized prosecutions of gay men and other men who have sex with men, based on discriminatory laws which criminalize same sex conduct [5]. Discrimination can also impact recruitment, retention and job performance of persons in the healthcare workforce, resulting in high economic costs [6]. Drivers and facilitators [7] leading to discrimination include, for example, stigma determined by fear, prejudice and stereotypes; legal and regulatory barriers, including punitive laws targeting people living with HIV, women, and other key populations, in accessing services; gaps in institutional level policies and means of protection for health care workers. Examples of stigma and discrimination in health care include: denial of care due to age or migrant status; forced sterilization of HIV positive women; stigmatizing treatment such as provider non-recognition of gender identity; negative attitudes and discriminatory behavior from providers; breach of confidentiality, such as requiring parental consent before accessing health care; mandatory testing or treatment without informed consent [8]. Health workers

UNAIDS Contribution to WHO High Level Commission on Health Employment and Economic Growth 9 April 2016
themselves may also face discrimination in health settings – on the basis of age, sex, ethnicity, language, HIV status and other prohibited grounds for discrimination. The significant gender imbalance across the health sector reveals and perpetuates underlying gender inequalities that mean that many women health workers face bias and discrimination in pre-service and in-service education and employment systems. To address this, the UNAIDS Strategy 2016-2021, adopted in October 2015, has a clear target to eliminate HIV-related discrimination with a particular focus on health care, workplace and educational settings [9]. The World Health Organization also places in its forthcoming global strategy for human resources for health a similar priority on ending discrimination in health-care settings. Building on this political momentum and that of the SDGs, UNAIDS and WHO’s Global Health Workforce Alliance have initiated an agenda to put an end to discrimination in health care settings [10]. It prioritizes three critical areas for action: political impact, accountability and implementation. In efforts to increase the development of the global health workforce, UNAIDS asks that the Commission supports efforts to eliminate discrimination in health care settings, including by: (1) Building capacities and competencies of health care workforce to provide stigma and discrimination-free services; (2) Supporting the building and sharing of the evidence base and best practices to eliminate discrimination in health care settings; (3) Investing in accountability and redress mechanisms; strengthening mechanism and frameworks for monitoring, evaluation and accountability for discrimination free health care; (4) Setting the standards for discrimination-free health care, including ensuring: the removal of legal and policy barriers that impede discrimination-free health care, including but not limited to prohibiting mandatory testing and treatment and other coercive practices, and respecting patient privacy and confidentiality; health care settings provide timely and quality, non-judgmental health care regardless of gender, gender expression, sex, nationality, age, disability, ethnic origin, sexual orientation, religion, language socioeconomic status or HIV or other health status, or because of selling sex, using drugs and/or living in prison; o Health care providers actively informing people of their rights; health care settings link marginalized and most affected populations to additional service providers, peer support networks or community-based organization, or legal services, when necessary. (5) Supporting the empowerment of clients and civil society to demand discrimination-free health care, including the participation of affected communities in the development of policies and programmes promoting equality and non-discrimination in health care.

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[1] General Comment No. 20: Non-discrimination in economic, social and cultural rights. New York (NY): United Nations Committee on Economic, Social and Cultural Rights; 2009 (E/C.12/GC/20); People across the globe face barriers to accessing quality health care and enjoying the highest attainable standard of health. The reasons why this occurs varies between countries and communities and within them. However, regardless if one lives in a high resourced country or a low, some barriers are present across the board. This includes the various forms of discrimination faced by marginalized populations, who are stigmatized, criminalized and otherwise mistreated simply because of who they are, what they do or their health status. Thus, one’s race, socioeconomic status, age, sex, gender, sexual orientation or gender identity and expression, HIV or other health status, being disabled or selling sex, using drugs, and/or living in prisons, determines the likelihood of being discriminated against in health care settings. In addition, discrimination operates through processes of inequality that are rarely linked
solely to one characteristic of a person, but are often fueled by multiple factors; see also: Guidance Note. Reduction of HIV-related stigma and discrimination. UNAIDS. 2014. Available at http://www.unaids.org/sites/default/files/media_asset/2014unaidsguidancenote_stigma_en.pdf


**Submission 52**

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**Contribution**  
Case study

**Answered**  
8

**Contribution**  

Engineering Manager in the Health Care Sector

Hospital Technician

Job description

On behalf of IFHE-EU (the European branch of IFHE), a collaborative platform of the hospital technician’s organization from Austria, Germany, Switzerland and Holland has set itself the task of creating a document to frame the professional profile of the engineer in healthcare facilities. This paper is to be structured in a way that the whole issue of the job profile - including its related problematic nature - can be presented to the competent bodies and authorities. Subsequently, efforts should be pursued to give the professional image of a Hospital Engineer a statutory framework. Given the interest of European countries that are represented in the IFHE-EU, to the task and the outcome, the present study will be translated from German into English and French for further publication in other member states. With sufficient support from the IFHE-EU this work is to be presented to the competent bodies of the EU in order to obtain a decision at European level to regulate and determine the profession of an engineering manager in the health sector. With a good structured Technical Department in Healthcare Infrastructures and with a well educated technical staff, then it is possible to reduce the maintenance and repairing costs. There is also much more knowledge available in the hospital itself- very interesting in giving advices and purchasing criteria’s about renovation, building, safety, energy, ventilation,......even medical apparatus Detlef Mostler Martin Krammer Paul Merlevede

**References**

[1] Graz University of Technology, field of study Biomedical Engineering, Hospital engineering curriculum.

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[4] Various articles in journals and conference papers of the author • Various Laws and Regulations

[5] Documents of FKT, WGKT, OVM
[6] Various Documents from VAMED KMB staff development
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Access to health care is a prerequisite to achieving universal health coverage (UHC). This, in turn, depends on a sufficient supply of health professionals with the skills and commitment to provide health care responsive to community needs. Currently the achievement of UHC is limited by the maldistribution of health professionals, both geographically and in terms of scope of practice. (1) This is further exacerbated by the location of health professional education institutions, and selection strategies that favour the urban privileged. (2) The mismatch between health professional education and the needs of local health systems and service delivery is a logical consequence of limited collaboration between the health and education sectors, and weak links between educational institutions and the health systems which employ graduates. (3, 4) Simply adding more qualified health workers into the mix without addressing issues of distribution will have little impact. The Training for Health Equity Network (THEnet) is a global community of practice including 11 medical schools from seven countries (five continents) who aim to address health system inequalities by training a workforce that is responsive to the priority health needs of underserved communities. (5) THEnet member schools share a social accountability mandate: their core mission is to recruit students from, and produce health professionals for underserved communities. The first collaborative piece of work done by THEnet was the development, pilot testing and broader implementation of an Evaluation Framework for Social Accountability in Health Professional Education, with which schools could critically self-assess their progress in different areas towards social accountability. (6) Although some THEnet schools were already following the progress of their graduates, (7, 8) to address the impact of the schools in terms of producing fit-for-purpose graduates it was necessary to design and implement an international graduate outcome study to answer the following questions: (1) To what extent are student cohorts representative of the population? (2) What are the practice intentions of students from THEnet schools at entry to and exit from their medical studies? (3) How do these practice intentions translate to actual practice? Methods THEnet Graduate Outcome Study is an international prospective cohort study tracking learners throughout training and ten years into
practice as part of the longitudinal impact assessment described in THEnet’s Evaluation Framework. (9, 10) Data presented here include cross-sectional entry and exit data from a questionnaire developed to be internationally applicable, based on the Australian Medical Students’ Outcome Database questionnaire. (11) Questions ask about background, ethnicity, rurality of schooling, socioeconomic status and practice intentions, using nationally appropriate quintiles of rurality and socioeconomic status to allow comparisons between countries. These data are supplemented with some longitudinal postgraduate data from those schools already collecting this data (JCU, ADZU and WSU).

Results
Findings from more than 2500 learners from seven THEnet medical schools in five countries (four continents) are included in total in our study to date, with rolling recruitment adding new cohorts each year. Although comparison data are limited, students at THEnet schools are more likely to come from the lowest two socio-economic quintiles and from non-urban backgrounds than other students, more closely reflecting population demographics. (10) Those from disadvantaged and rural backgrounds demonstrate a higher intent to work with these populations in their future practice. Furthermore, intention to practice in a non-urban location increases between entry to medical school (777/1510; 51.5%) and graduation (153/188; 81.3%; p=0.000). Strong retention of graduates in rural areas after graduation is demonstrated. For example, more than 80% of graduates from Ateneo de Zamboanga in Mindanao, the Philippines, remain working in underserved areas in the southern Philippines. (12)

Discussion/Conclusions: THEnet partner schools have a student population that more closely matches reference populations when compared with traditional schools. These data confirm that rurality of origin predicts intending to work with rural and remote and other underserved populations. Furthermore, in contrast to what happens in the majority of urban mainstream medical schools, for students from THEnet schools the intention to practice with underserved communities gets stronger as they progress through the medical course, suggesting that experience throughout the course is socializing graduates towards meeting population need. Broadening the population base from which medical students are selected will assist with the aim of producing a medical workforce that is distributed according to health care need.

References
Interventions in health sector through public systems all around the federal republic of India have been enhanced since a decade. This led to induction of a large human resource – largely young persons. This helped build a positive organisation culture pressing the peripheral health facilities to more effectively utilize the technology; more vigilance and inquisitiveness, promoting a sense of accountability, thereby containing the morbidity at a much earlier stage in its natural history (1). Health sector is perceived as a major employment generator with high demand from labor market and government is promoting the strategies to enhance the availability of human resources, nevertheless upholding the quality and regulating the institutes on established norms is a major challenge. Ministry of Health in India is making guided by the highest political body to improve its course in generating employment for health care delivery (2). Training institutions need to work hand-in-hand with service delivery institutions. Continuous dialogue with service providers can keep the trainers well informed on training needs and they can concurrently make the curricular changes in induction as well as in-service training. With the increasing number of private players entering in professional education in LMIC, regulatory authorities need to be more vigilant. While innovation needs to be promoted, vested interests need to be contained. There is an urgent need to transform the educational strategies exploiting the technology in reaching to the larger number of trainees on a cost-effective basis. In this context e-learning courses not only reduce the cost but saves time of health professionals increasing their availability at peripheral health facilities (3). The demands on medical education, healthcare delivery and public health are fundamentally shaped by the country’s sociopolitical environment (4). This fact must be kept in centre by all countries where HRH is a crisis. Many countries who submitted their commitment in context of GHF at Recife can enhance their voyage towards universal health care. Consequently it would facilitate their journey towards sustainable development goals.

References

[4] Jacob KS: Politics of Medical Education in India; Economic and Political Weekly of India, Mumbai MARCH 19, 2016 vol li no 12, page12-15
R. Malkin et C. Whittle ont montré que dans les hôpitaux rwandais dont le technicien avait suivi pendant un an la formation de l'ONG Engineering World Health, il y avait 74,5% d'équipements en moins hors-service que dans les hôpitaux équivalents dont le technicien n'avait pas suivi cette formation (1). La productivité des premiers avait augmenté de 118%. Ces techniciens vont 2,5 fois plus que leurs collègues non formés, chercher de l'information à l'intérieur du Rwanda et 4,6 fois plus à l'extérieur, même si peu d'entre eux disposaient d'Internet à l'hôpital ou à la maison. Plus confiants, motivés et avec de bons résultats, ils sont mieux reconnus.Ces résultats sont particulièrement intéressants quant on sait qu'au moins 40 % des équipements médicaux sont hors services dans les pays à faible ressource et ressource intermédiaire (2) et que la Banque Mondiale a investi 1,5 milliard de dollars US entre 97 et 2001 dans des programmes incluant des équipements médicaux dont certains avaient jusqu'à 30% d'équipements sophistiqués (3). Or jusqu'à 70% des équipements complexes peuvent être en panne (4). En 2015, 67 étudiants de l'Institut d'été de Engineering World Health, travaillant au Nicaragua ou Tanzanie ou Rwanda, chacun avec un technicien de l'hôpital où ils étaient affectés, ont réparé 885 équipements médicaux dont la valeur est estimée à 1,8 million de dollars US (5). Investir dans la formation des techniciens biomédicaux pour diminuer le nombre d'équipements hors service représente donc un gain économique énorme. D'autant plus que moins d'interventions chirurgicales devront être reportées, moins d'enfants devront être placés à 2 ou plus dans un incubateur ou sous une lampe de photothérapie. Or on sait que placer deux enfants de faible poids dans un même incubateur tend à augmenter la mortalité de ces enfants de 17% parce qu'il n'est plus possible de contrôler la température de chacun séparément (6). L'impact réel sur la santé des patients peut être considérable, mais il est très difficile à quantifier, sachant qu'il dépend en particulier de l'adaptation du nombre d'équipements fonctionnels aux besoins, un paramètre utilisé en gestion des équipements par les ingénieurs biomédicaux. Une enquête par des étudiants de l'Institut d'été de Engineering World Health, travaillant au Nicaragua en 2014, et conduite par D. Emmerling, sur les bénéfices notés par les médecins suite à la formation des techniciens par EWH s'est soldée par un échec (7) Or S. Mullally a montré dans sa thèse (8) que sur environ 200 services de génie biomédical d'hôpitaux de PED, plus de 76% en Afrique n'ont pas suffisamment de personnel. 85% ont de la difficulté à trouver des ingénieurs et 73% des techniciens. C’est la situation décrite dans l’étude conduite en 2011 en Zambie (9), financée par THET : 11 postes créés ne trouvaient pas de titulaire pour compléter les 14 postes occupés.Ces données sont confirmées en 2016 par les résultats de l'enquête menée par l'équipe Medical Devices de l'OMS sur les dons d’équipements (10). Plus de 90% des hôpitaux des PED ont déjà reçu des dons. Leur qualité est
corrélée à l'utilisation faite par les bénéficiaires du Guide sur les dons d'équipements médicaux (11). Mais les bénéficiaires signalent toujours une insuffisance de personnel formé tant pour les utiliser que les maintenir. Et les ONG donatrices ne font que trop peu le personnel présent. En réduisant le nombre trop important d'équipements hors-service, ce qui peut conduire à acheter moins d'équipements ou à demander moins de dons, l'investissement dans la formation et l'embauche de techniciens biomédicaux est donc particulièrement rentable et socialement importante. L'évolution du pourcentage d'équipements hors service, celle du taux d'utilisation de ceux qui fonctionnent sont des paramètres valables pour mesurer l'effet des formations des techniciens biomédicaux et d'une embauche répondant aux besoins.

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[7] Emmerling D., DHT, Duke University; communication privée
Dans le domaine des équipements médicaux, les progrès de la technologie permettent d'en mettre sur le marché de plus en plus puissants, de plus en plus chers, offrant des possibilités bien au-delà de ce que la très grande majorité des utilisateurs ont besoin ! Il suffit de prendre l'exemple des scanners CT qui ont offerts progressivement 1, puis 2, puis 16, 32, 64 coupes simultanément. Et qui peuvent maintenant en offrir 256 pour les études cardiaques! Au prix d'exigences très importantes, tant pour l'installation (puissance électrique jusqu'à 100 kW) que pour leur exploitation (contrat de maintenance très coûteux, utilisateurs très bien formés) Or pour réaliser des examens statiques, de beaucoup les plus courants et nombreux, une telle puissance n'est pas nécessaire. C'est pourquoi, en 2000, Siemens a commercialisé un scanner, nommé SMILE, fournissant des clichés de qualité comparable à celle des modèles haut-de-gamme, mais développé avec des objectifs qui le rendaient parfaitement approprié pour les pays à revenu faible ou moyen: - puissance électrique de 17 kW (pas 100 !) qui permettait de l'installer dans bien des hôpitaux régionaux de ces pays;- Rotation du tube Rx en 2 secondes et mode hélicoïdal, alors d'avant-garde;- installation en 3 heures par un technicien de l'hôpital avec le manuel d'installation en mains;- logiciel d'utilisation très simple et auto-formation du personnel utilisateur;- possibilité de consulter un spécialiste du fabricant;- surveillance technique par Internet et détection automatique du module posant problème;- envoi du module défectueux et remplacement très facile et rapide par technicien local doté de quelques outils; - pas de contrat de maintenance et un prix de 200 000 $US quand les scanners conventionnels valaient 500 000 $US ou plus ! Alors qu'il était destiné aux pays à revenu faible ou moyen, son premier client a été la Cleveland Clinic, aux USA !... Ce scanner, révolutionnaire sur le plan technique, n'a pas été adopté par la clientèle naturelle, fort probablement victime de la fascination de cette clientèle pour la haute-technologie. Fascination bien mentionnée dans le document "Dispositifs médicaux: Comment résoudre l'inadéquation?" (1). Elle constitue un frein important à l'achat d'équipements appropriés. Et Siemens ne le vend plus. Ce dernier document démontre qu'il est plus que jamais nécessaire que les pays à revenu faible ou moyen puissent acheter et utiliser des équipements appropriés, tant sur le plan technique que médical et financier. Plusieurs fabricants en commercialisent déjà. Mais cette commercialisation se heurte à celle très agressive des fabricants d'équipements conventionnels, s'appuyant souvent sur la fascination des acheteurs pour la haute-technologie. De nombreux départements universitaires développent également des équipements appropriés. Certains de ces équipements sont listés dans le Compendium des technologies innovantes pour les établissements à revenu bas ou moyen (2) L'ONG Humatem travaille actuellement à la rédaction de documents de sensibilisation des acheteurs aux avantages des équipements
appropriés et aux critères qui permettent de les repérer dans l'offre commerciale mondiale. Dans une étude économique (3), les analystes de GE Healthcare mentionnent que les dépenses liées aux équipements peuvent devenir hors-de-contrôle, résultant d'une multiplication des équipements par lit de patient aux USA. Ce nombre est passé en moyenne de 8 à 13. Ils facilitent de plus en plus le travail des infirmières, la surveillance des patients, mais leur taux d'utilisation reste assez faible. Pour favoriser l'achat d'équipements réellement appropriés, pour éviter que leur nombre n'augmente de manière "hors-de-contrôle", il est nécessaire d'embaucher et de former les ingénieurs biomédicaux clinique pour qu'ils deviennent les consultants des décideurs administratifs ou médicaux dans leur établissement, pour qu'ils optimisent l'achat et la gestion des équipements. Ce qui suppose une formation très poussée qui corresponde au moins au niveau 3, avancé de la gestion des technologies de santé appliquée aux équipements médicaux, de l'AAMI (4). Ce qui suppose également que chaque institution acheteur et/ou gestionnaire d'équipements puisse disposer facilement de ses conseils. Les évolutions mentionnées étant déjà à l'œuvre, il est nécessaire de commencer dès maintenant à embaucher et former ces ingénieurs biomédicaux clinique de haut niveau.

References
Imbalances and inequitable distribution of health care workers result in increased neonatal mortality. Without a trained health worker at the time of birth, the chances of survival for a sick or small neonate are small as care for newborns requires advanced knowledge and skills. Over 80% of health workers who provide care for newborns are nurses and midwives (COINN survey, 2015; data not published) who often practice in rural settings in countries with the highest neonatal mortality rates where transportation to the higher level facilities is not always available. These health workers are often combining midwifery with nursing. The nurse-patient ratio that greatly influence patient outcomes can range from 50:1 (in Rwanda, Malawi, Columbia, and Zambia) to 5-10:1 (in Macedonia and South Africa (COINN survey, 2015; data not published). Health workforce is one of the major barriers for adequate neonatal care (Moxon et al, 2015). Considering that midwifery in low resourced countries is sometimes more widespread than nursing, it can be assumed that additional training of midwives/birth attendants can help to decentralize neonatal care, level the health care worker imbalance, and improve neonatal outcomes during the first days of life.

References
The training and education that these workers have regarding neonatal care is vital – much of the success was gained from work are targeting health professionals and community health workers in training related to Helping Babies Breathe (HBB), Essential Newborn Care, and S.T.A.B.L.E. However, over 30% of health professionals involved in provision of neonatal care have only generalist training-not neonatal specific training (COINN survey, 2015; data not published). COINN survey for the piloting a neonatal nursing workforce database (project funded by AbbVie) showed that over 30% respondents are using free internet resources in addition to traditional educational and training models. Thus, online depository of free educational materials, recorded webinars, further development of ‘train the trainer’ programs (basic neonatal care as well as advanced neonatal care) can be of value for health workers in low and mid level income countries as the internet and mobile phone services are spreading all over the globe. Connections with international groups are vital here as well. It is important to partner with other organizations in order to create a sustainable, well-trained workforce. For example, COINN partnered with local neonatal nurses, a neonatal nurse who is a missionary connected with a university, and helped them form a neonatal nursing association in Rwanda. This organization is, in turn, working with the Ministry of Health to raise the standards of neonatal nursing care in country. COINN also partnered with a for profit company to bring health professionals in country to be trained in a train the trainer model of Helping Babies Breathe, Essential Newborn Care, and other programs. Building a sustainable, well trained workforce is the ultimate goal-this must be done by having ongoing training and determinations of learning and application of the knowledge as it relates to neonatal outcomes. So key educational and training models are ongoing, sustainable, interdisciplinary, and across public, private partnerships. Use of different modalities of teaching/learning is important-online resources, quick/short 15 minute YouTube videos are accessible to many and facilitate learning. Simulations such as are used in Helping Babies Breathe along with classroom face to face or online teaching must be used to reach all types of learners and to make teachers more accessible to the highest need areas. COINN’s survey found that many nurses have no neonatal nursing texts or journals so face to face, online, video, and train the trainer programs are essential to increase knowledge of essential newborn care.

References
**Submission 59**

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<th>Name/Position</th>
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**Contribution**

The experiences and practices of Medical Schools of the Ateneo de Zamboanga University (ADZU-SOM) and the School of Health Sciences of the University of the Philippines-Manila (UP-SHS) provides cases of how the elements of social accountability in health professional education should be integrated into a monitoring and accountability framework; social accountability values shared by faculty and reflected in the curriculum and learning experiences of the students, attributes of fit for purpose graduates and their impact on communities and health outcomes. Case study 1ADZU-SOM started in 1993 when a group of concerned physicians and other community leaders came together to establish the Zamboanga Medical School Foundation (ZMSF). The school was founded with an agreed mission to help solve the health problems of south-western Mindanao and to serve the needs of the regions poorest and most isolated communities. In 2006, the ZMSF became a part of Ateneo De Zamboanga University (ADZU). ADZU-SOM is an innovative medical school whose curriculum combines competency and problem-based instruction with experiential learning in the community, responsive to the changing patterns of health-care development and the needs of communities, sensitive to the social and cultural realities of south-western Mindanao. The student spend one month per semester in the community from their first year, culminating in a whole year community immersion/engagement in their fourth year, has more than 80% of its graduates practising in the region compared to the national average of 68% of medical graduates practising overseas. ADZU-SOM graduates often practice in areas that previously did not have a doctor, resulting in a 55% increase in the number of municipalities in Zamboanga with a doctor. In 1994, when the school first opened, the infant mortality was 75-80/1000 live births. In 2008, it has dropped to just 8 per 1000 since the school's graduates first went to work in the region over 15 years ago. Case study 2Established in 1976, UPM-SHS was designed to train community-oriented health workers to counteract the twin problems of “brain drain” and inadequate health care in rural communities of the Philippines. In 1989, it formally became the School of Health Sciences, an independent unit of the University of the Philippines, Manila. Through its democratized admissions policy, UPM-SHS provides scholarships and admits deserving high-school graduates from remote and largely inaccessible communities. Prospective students, nominated by local community leaders, are bound by a contract to return to serve their communities after completion of the program. UPM-SHS is one of the Philippines’ top-performing schools in midwifery and
has adopted a “step-ladder curriculum,” ultimately leading to the degree of Doctor of Medicine (MD). Similarly, more than 90% of medical graduates from UPM-SHS and more than 80% of midwife and nursing graduates serve in local Philippines areas of dire need.

References

Submission 60
Name/Position: Vince Blaser, Director, Frontline Health Workers Coalition
Organization: IntraHealth International
Type: United States of America
Contribution: Evidence
Question Answered: 5, 10, 11
In China, difficulty in seeking medical treatment is quite common, which is mainly caused by the imbalanced and unfair distribution of medical resources. From the perspective of health workers, which is an important medical resource, there are the following risks and effects: First, the distribution of health workers is uneven in urban and rural areas, which leads to the unfairness to patients in seeking medical treatment. In China, there is a large gap between the urban and rural areas and the distribution of medical resources is uneven, with most medical resources distributed in urban areas and few in rural areas. In particular, since medical departments treating severe diseases are only located in urban areas, serious patients in rural areas can only be treated in urban areas instead of seeking medical help in their hometown. To a certain degree, it increases the treatment cost. Second, health workers with different levels of specialized skills are unevenly allocated. Most excellent health workers work in large hospitals. Meanwhile, county-level and town-level hospitals are low in their medical treatment level. Most town-level health workers do not receive systematic standard training. As a result, early diagnosis of diseases and proper treatment demonstrate severe deficiencies and fail to satisfy the residents’ high requirements on health. Third, the health workers good at different technical fields are unevenly allocated. The cause of the surplus of medical talents is the unreasonable distribution of health resources. Just as mentioned above, a good health worker entails a lot of practices. With the continuous expansion in enrollment at universities, a lot of medical students graduate without sufficient practices and experiences. Due to the inadequate medical input, hospitals often suffer from losses. Health workers at different proficiency levels often differ greatly in terms of their income, so does the degree of medical risks. For example, the shortage of pediatricians is largely related to their overall low income and high risks. Some measures should be taken to relieve the unreasonableness of resource distribution of health workers. On the one hand, macro adjustment and overall control of the government should be enhanced to strengthen the construction of infrastructures in community hospitals so that excellent doctors and nurses will be willing to work in community hospitals. After unified training, health workers’ skills can be improved and patients with minor illnesses can seek medical treatment in community hospitals. On the other hand, grading system of diagnosis and treatment should be perfected and Internet should be made full use of. On the basis of increasing equipment and workforce for basic-level or community hospitals and medical centers, resources of health workers should be re-allocated reasonably, improving ordinary health workers’ initiatives and reducing patients’ cost of medical treatment. In addition, non-public hospitals should be developed reasonably under the government supervision, providing...
health workers with certain free space to serve the residents according to market supply and demand.

References


3. http://www.nhfpc.gov.cn/yzygj/s3594r/201509/4a8c175a3d174b2c956b1163d33b8304.shtml

**Submission 62**

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<td>This contribution is a costing analysis prepared for the Frontline Health Workers Coalition in March 2015 titled &quot;The Cost of Scaling Up the Health Workforce in Liberia, Sierra Leone, and Guinea Amid the Ebola Epidemic,&quot; available at <a href="http://frontlinehealthworkers.org/wp-content/uploads/2015/03/WAfricaCosting.pdf">http://frontlinehealthworkers.org/wp-content/uploads/2015/03/WAfricaCosting.pdf</a>. It was prepared by Eric A. Friedman, J.D., Institute Associate and the Project Leader for the Platform for a Framework Convention on Global Health (FCGH), O'Neill Institute for National and Global Health Law at Georgetown University. The paper used publicly available data (as of March 2015) to model the relative low cost of scaling up the health workforce in Liberia, Guinea and Sierra Leone.</td>
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This submission is a Frontline Health Workers Coalition Policy report titled "A Commitment to Community Health Workers: Improving Data for Decision Making." Available at: http://frontlinehealthworkers.org/wp-content/uploads/2014/09/CHW-Report.pdf In the report, the Frontline Health Workers Coalition and partners call for human resources for health (HRH) stakeholders to create a common definition for the “community health worker” along with an agreed-upon set of core tasks and competencies, using the International Labour Organization definition as a guiding framework. To enhance the quality and availability of data for decision-making the report also calls for the creation of guidelines for a minimum data set of information on CHWs and the creation of national registries integrated into national human resources information systems to house this minimum data set.

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**Contribution**

I am submitted the written testimony of Mr. Pape Gaye President and CEO of IntraHealth International Before the United States Senate Foreign Relations Subcommittee on African Affairs during its hearing titled, "The Ebola Epidemic: The Keys to Success for the International Response" on December 10, 2014.


Video of oral testimony: [https://www.youtube.com/watch?v=jd_bv33Y9Vk](https://www.youtube.com/watch?v=jd_bv33Y9Vk)


**References**

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**References**

Investment in health and social care must include growing the nursing workforce. Nursing represents the vast majority of all health care professionals and demand for nurses is growing across the world. According to the World Bank, there was a shortage of 2.4 million nurses in 2012 and this trend is only likely to worsen with Europe expecting a nursing shortage of nearly 600,000 by 2020, while in the US this figure is expected to reach 800,000. We believe that it makes sense to focus investment to address this imbalance, with the potential for millions of new nursing jobs. Doing this will not only support economic growth and job creation, it will also empower women in countries where opportunities for them to join the skilled labour force are limited, enabling them to attain a higher level of education and a professional career. Investing in career structures and other retention initiatives for nurses is vital in delivering universal health coverage and supporting patients to be active, both socially and economically. Compounding the challenge of a global nurse shortage, the current workforce is rapidly ageing and many countries are struggling to attract a younger generation to replace them. As a result, the RCN would advise that this initiative prioritise investment in healthy workplaces to help retain existing staff and attract new nurses. The RCN defines ‘health workplaces’ as those which offer fair pay and rewards and have high quality employment practices and procedures which promote a good work-life balance. We have collected evidence which shows that the creation of health workplaces is an excellent way to ensure a happy, productive and sustainable workforce. Nursing plays an absolutely critical role in supporting people to be healthy, active members of society throughout the life-cycle. The global rise of non-communicable diseases (NCDs) and a rapidly ageing patient demographic has presented a stark economic challenge to health systems around the world. Nursing is a vital asset for addressing this challenge. This includes: (1) Supporting the development of infants from conception all the way through to adulthood. An increasing body of evidence has been compiled about the central role of health visitors (as they’re referred to in the UK) in working with parents and families, building trusting relationships and facilitating behaviour and lifestyle changes for the benefit of babies and children as they move into adulthood. (2) Rehabilitating older patients so that they are able to maintain as much independence as possible and, wherever feasible, to stay out of acute settings which can be unnecessarily expensive. This is achievable because nurses often act as educators to help patients manage their conditions, enabling them to pursue economically and socially active lives. Investments in nursing delivers value for money. Independent research (currently unpublished) indicates that increasing the number of registered nurses where there is an undersupply is likely to be a cost effective use of financial resources. This research used panel analysis and health economic modeling. It found that increasing registered nurses led to an incremental cost-
effectiveness ratio of £10,539 per quality adjusted life year (QALY). To put this into perspective, the UK’s National Institute for Care Excellence (NICE) – the body which publishes guidance on the use of new treatments, medicines and practices – accepts as “cost-effective” those interventions with a ratio of less than £20,000 per QALY. As a result, this research indicates that investing in a strong nursing workforce is highly cost effective. We will aim to make this research available to the WHO once it has been peer reviewed and published. Investment in advanced nursing practice bolsters innovation and more cost-effective methods of care. The RCN has collected a large number of case studies from within the UK. These provide robust economic assessment of the value of nurse-led innovation in practice. In addition, the RCN has also collected a number of international case studies which illustrate the positive contribution which advanced nursing practice makes both to patient outcomes and to expanding universal health coverage. Nursing is a vital asset in protecting public health. Without this, economic growth and job creation are at serious risk. Nursing is at the heart of minimising the impact of illness, promoting health and helping people to function at home, work, and leisure. As such, the RCN believes that improving public health should be seen as part of all nursing and midwifery roles. The RCN report, ‘Nurses 4 Public Health’ brings together case studies from across the UK and care settings. These illustrate the contribution of nursing to public health in the UK.

**References**

Increasing Healthcare Costs: Data provided by the WHO show the increasing cost in healthcare services include many kinds of costs associated with delivering a healthcare service as the following: (1) The cost of providing qualified medical doctors for primary and secondary care. (2) The cost of providing other qualified medical professionals as nurses and supporting medical professionals as X-Ray and Laboratory. (3) The cost of building clinics and hospitals that can meet for the need. (4) The cost of providing suitable and up to date medical equipments. (5) The cost associated with all the above costs but in rural areas, which may add more cost than urban areas due to how easy to reach these areas. (6) The cost that patients have to pay to find a needed and specialised medical service especially in rural area. (7) The cost of developing all these healthcare infrastructures. Healthcare Human Capital: Data provided by the WHO demonstrates that there are countries, especially poor and underdeveloped countries, suffering from shortages of medical workers while other countries, especially rich and developed countries have more than needed quantity of medical worker. Also, there are countries exporting medical workers while other countries counted as importing medical workers. There are many reasons that can explain this reality. (1) Medical workers in poor and underdeveloped countries may not find suitable working environment for their speciality in their countries. (2) Medical workers seek better standard of living. (3) Medical workers seek higher salary level in rich countries. (4) Highly specialized medical doctors seek scholarship in rich countries especially from known universities for their researches. All the above reasons led these medical workers to leave their poor and underdeveloped countries and migrate to rich and developed countries where all kinds of opportunities are available for their sophisticated field of study. This explains why medical workers have high mobilization rate between countries.

Recommendation: Due to the above mentioned challenges, a single country may not be able to solve problems in its healthcare system alone which is internationally connected. As a result, it is highly recommended that an international organisation, in this case the World Bank OR the World Health Organisation, should take control and lead toward creating a healthier international community. This is explained as followed: A) The Helicopter View: Since medical equipments, technology, and services are imported and/or exported in many countries. In addition, medical workers usually have high rate of mobilization between countries, then this two challenges are not at only the level of one country. Indeed, it is an international issue, and an international body or organisation is needed to look after this matter from a helicopter point of view. This means that the organisation will look to this problem from above internationally and not just in each country separately. The only body or
organisation that can have a helicopter view of this challenge is the World Bank.

B) The International Medical Worker Organisation (IMOW): It is highly recommended that the World Health Organisation established what can be called as "The International Medical Worker Organisation" or IMOW which is controlled and ruled by the World Bank or the WHO. All kinds of medical workers who hold a certified medical degree and qualified to serve as medical doctor, professional or nurse should register in this organisation. Then the IMOW should create a world health map, which can show exactly the areas and even villages that are in need of healthcare services. Accordingly, the medical workers will be distributed on the health map to improve the general health of people everywhere in the world. The world health map should be updated as soon as reports are sent from each area.

C) The International Fund for Health Improvement (IFHI): The World Bank have to establish a fund which can be called as the International Fund for Health Improvement (IFHI). Since health and healthcare services are an international issue and everybody in the world is affected either directly or indirectly, positively or negatively by these issues, all countries in the world should contribute to the fund. This is a must for a better health all around the Globe. The money in the fund will be used directly to finance any medical expenses to improve healthcare in areas around the world where healthcare services are not provided and/or needed to be developed. The World Bank has the role of controlling the IFHI and look after its challenges and reports.

References

Policy instruments to pre-empt and manage the international mobility of health workers. International mobility of health workers is increasing, widening the health gap between resource-rich and -poor countries. This paper draws on selected country experiences to highlight innovative instruments at country, bilateral and international level. 1 Individual country level: domestic instruments. Improving health workforce sustainability can address deficiencies which in source countries push professionals to leave and in destinations cause reliance on foreign inflows. 1.1 Pre-empting mobility: Hungary’s use of ‘sin taxes’. For source countries, improving employment opportunities, working environments, career paths, infrastructure, meritocracy and remuneration help stem outflows. Hungary uses taxes on unhealthy foods to fund retention. Young doctors can apply for higher salaries in exchange for providing mandatory services after specialisation. Salaries of doctors and nurses have also gradually risen, funded by the 2011 Public Health Product Tax which increased acceptance during economic austerity. Destination countries can draw on several tools to reduce demand for inflows, such as expanding educational capacity, domestic recruitment and regional distribution. In the United States where the number of domestically trained nurses doubled in 2001-2012, migrant nurse inflows have fallen (OECD 2016). 1.2 Managing mobility: Romanian diaspora networks. Source countries that encourage networking with health workforce diaspora can benefit from knowledge transfer and partly offset brain drain. Romanian migrant doctors collaborate with colleagues ‘back home’ exchanging expertise and seeing patients when visiting periodically (Boncea 2015). In destinations, induction programmes, adequate recognition procedures, and mentoring can help integrate foreign-trained health workers, prevent discrimination, skills loss/waste, and premature departures. 2. Country-to-country: bilateral instruments. Destination-source agreements, twinning of institutions, staff sharing and targeted recruitment are tools to share mobility benefits and costs more fairly. 2.1 Pre-empting mobility: United Arab Emirates. Hospitals importing knowledge Twinning programs between educational institutions or hospitals can improve management structures. The United Arab Emirates and U.S. top performing hospitals have established several joint hospital boards to transfer management skills, improve work environment and quality, which may reduce the drivers for health workers to leave the country (Merritt et al 2008, Korneef et al 2012). 2.2 Managing mobility: Sweden reinforcing subsidiarity and self-help. Bilateral agreements can foster return migration and provide support for infrastructure and healthcare. The Swedish-Somali project by
the Swedish International Development Cooperation Agency (SIDA 2015) supports Somali diaspora to return to their home country to contribute to its reconstruction, including in healthcare. The program, positively assessed, is being expanded. Focusing recruitment on countries with demonstrated oversupply can produce a triple-win for health workers, destination and source. Germany recruits nurses from Serbia, Philippines, Bosnia and Herzegovina, and offers a support package covering pre-departure, transition, arrival including language classes, support in recognition of diplomas and cultural integration, and facilitates job seeking at hospitals or nursing homes (GIZ 2016). 3 International level: global instrumentsGlobal action on mobility has been incremental and underfunded. Reviving policy commitment, exploring new financing sources, and fostering collaboration can accelerate action. 3.1 Pre-empting mobility: drawing from GFATM and GAVI International donors can help reduce the root causes of mobility in low-income countries. Analysing mobility drivers, identifying investments, evaluating its impact, can make an investment case. Disease-specific responses, such as HIV/AIDS or large-scale vaccination programs show that demonstrating returns on investment may release funds. The GFATM or GAVI showed that embedding health system strengthening within disease-specific funding is feasible; yet expanding eligibility to all relevant health worker cadres are key to sustainability. 3.2 Managing mobility: tapping the potential of mutual learning and funding Cross-country collaboration and data exchange can improve monitoring of flows. The EU’s Joint Action on Health Workforce Planning and Forecasting (2016) has stimulated new dialogue with 90+ partners across Europe on mobility and planning. While new, the initiative has spurred awareness and collaboration, and could serve as a model elsewhere. African and other regional observatories can further act as catalysts, building on experiences of the Joint Action in Europe. Shared responsibility requires stepping up commitment and funds. The European Commission’s Directorate-General for International Cooperation and Development has financially supported Nigeria, India, Uganda and South Africa to improve management of mobility. Innovative but largely untapped additional schemes exist. The European Social and Cohesion Funds can support health worker training in economically disadvantaged European regions. The new “EU Trust Fund for Migration in Africa” (DG DEVCO 2016) allocates €253mil to migration projects, regrettably none address health workers. 4 Conclusions A variety of new, innovative policy tools have emerged worldwide to either pre-empt or manage mobility. A systematic synthesis of the tools, their transferability and scalability to other countries and regions would be the next step to maximize impact.

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2016).
Nurse role advancement as a strategy toward universal health coverage, career pathways for women and economic growth. Many low- and middle-income countries face significant health worker shortages. Task-shifting has received widespread policy interest, yet, to date global action and funding has often focused on community health workers as a short-term solution. Yet, strengthening the higher level health professions require equal attention as to reaching universal health coverage. An increasing number of countries globally are expanding the roles of nurses to fill physician shortages, increase quality and access, and provide supervision to lower-level cadres. In a study of 39 countries, two thirds had implemented relevant reforms in primary care [1]. There are multiple potential wins for low- and middle income countries to expand the roles of nurses: improving access, stimulating economic growth, and enhancing career options, particularly for women. Expanding access to reach universal health coverage Task-shifting whereby nurses take up roles from physicians has shown to improve access to health services [2]. South Africa has successfully scaled up workforce capacity for its HIV/AIDS response. The number of nurses qualified to initiate fixed-dose ART combinations increased from 250 in 2010 to 23,000 in 2012 [3]. Physicians focus on patients with co-morbidities and at late stages of AIDS. This workforce model, also supported by CHWs, has been central to the scale-up in ART coverage, including the initiation of 500,000 new patients on ART in 2012/13. Expanding nurses’ roles does not undermine quality. Nurse-provided care has shown to result in at least equivalent quality compared to physicians if adequately trained, moreover resulted in higher patient satisfaction, lower hospital admission, across a wide range of primary care settings [4]. Improving career pathways and autonomy of women Providing nurses the opportunity to expand their clinical roles requires educational institutions to offer high-quality programs, including at Bachelor’s and Master’s level. Experience in the U.S. has shown that expanding educational capacity helped move from a shortage to a large pool of highly educated nurses [5]. Expanding higher level educational programs has shown to enhance career opportunities and women taking up leadership roles [6], if combined with the creation of positions in the labor market and supportive policy and financing policies. Enhancing employment options and economic growth There is emerging evidence on the impact nurse role advancement can have on employment and economic growth. Drawing on case studies in Tanzania, Kenya and the Philippines, programs that empowered nurses in advancing their roles and leadership not only expanded access for vulnerable populations, but also stimulated economic growth [7]. In Brazil in the state of Sao Paulo, an increasing number of nurse entrepreneurs have created small businesses over the last two decades, contributing to small enterprise development locally [8]. Yet, policy-makers and educators need to lay the
conditions to encourage nurses to work in advanced roles. Creating favorable conditions to scale up nurses in advanced roles Although many countries have introduced task-shifting whereby nurses take up advanced roles, regulatory barriers persist that impede scalability [9]. In particular, restrictive and outdated nursing laws act as barrier, whereas up-to-date scope of practice in line with competencies can enhance nurse role advancement. Removing barriers from overly restrictive scope-of-practice laws also has considerable potential as to cost savings and can increase employment [10]. Policy options exist to expedite reforms, such as experimental laws linked to nationwide evaluations [9]. Moreover, financing policies act as barrier if new services are not reimbursed or at much lower levels. Identifying adequate levels of salary scales for nurses by level of advanced practice is critical for job satisfaction and retention. Finally, conditions to encourage nurses to work as entrepreneurs are not well understood. In a qualitative study in Iran on nurses with their own business perceived several barriers to their work, including overly traditional nursing structures, regulatory restrictions, and opposition by governmental managers [11].

Conclusion: A potential triple case can be made to invest into the nursing workforce to take up additional roles and functions – as part of overall workforce strengthening: on the grounds of health gain, women’s employment opportunities and the potential stimulation on economic growth. Investments can pay off in the longer term in health gain and economic benefits, yet require more high-quality studies to evaluate and quantify impact.

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nursing and midwifery research 2016; 21:45-53.
The expansion of universal health coverage in European countries between 1820 and 2010 resulted in higher rates of per capita growth and aggregate GDP growth. Universal health coverage did not just reduce infant mortality. It affected several factors, such as mortality rates and population growth, which both fell. When households had access to universal healthcare, they no longer had to compensate for high mortality rates through high birth rates. This provides further evidence that public healthcare investment can lead to improved economic growth (Strittmatter & Sunde, 2011). Efficiency of national healthcare systems is directly related to income inequality. Countries with a more equitable distribution of income have more efficient public healthcare systems (Ogloblin, 2011). Through the use of WHO statistical databases and World Bank databases, Ogloblin examined the efficiency of health systems in Australia, Brazil, Canada, China, France, Germany, India, Italy, Japan, Mexico, Nigeria, Russia, South Africa, Spain, United Kingdom and the United States. These countries are predominantly high- and medium-income countries with different levels of income inequality. The study concluded that healthcare policy and economic policy are mutually dependent. Public health systems have another important advantage over the private sector because of the way in which they are organised. Public health is based on the ‘systematic application of best practice technologies applied at population scale and systematic monitoring and data collection’ (Sachs, 2012:946). Interventions, such as vaccination campaigns, can be implemented across the population, which not only give widespread immunity but also demonstrate economies of scale. The mass provision of emergency services or public-awareness campaigns are more effectively delivered through public programmes rather than a more fragmented private sector provision (Sachs, 2012). There are several case studies that show how reducing ill-health can result in higher levels of productivity. A study (Ersado et al, 2004) focused on the impact of public investments, community health and the adoption of technologies that improve agricultural productivity in Tigray, Northern Ethiopia. One of the factors that negatively affected the uptake of agricultural innovations was the time that households spent being ill or taking care of a household member. Ill-health impacted on household income and the availability of labour. Households with high levels of ill-health were less likely to adopt new techniques which would either improve productivity or conserve resources. A study (De Mello, 2002) looked at the impact of local government spending, including housing/urbanization, health/sanitation, and transport services, on economic
growth in Brazil. It found that municipal economic growth depended on the provision of public goods and services by local governments. Spending on health/sanitation seemed to have the greatest impact on economic growth at local level. When looking at affordability of healthcare access, the US healthcare system, which is predominately a privatised system, ranked worst out of eleven comparators. This means that people either don’t visit a doctor, don’t get a test done, miss a dose of medication or don’t get a script filled due to cost. The US is the highest spender on healthcare of the eleven but doesn’t have the best outcomes. When compared to the Australian system, which spends half the percentage of the US GDP, the OECD statistics show that Australia’s healthcare system, which is predominately public, is more efficient and more effective when looking at life expectancy and mortality rates.

In McInturff, K. and Tulloch, P. (2014). Narrowing the Gap: The difference that the Public Sector wages make. Canadian Centre for Policy Alternatives, evidence is provided with regard to wages for women in the public and private sector. “Across a number of occupations more women than men are choosing to work in the public sector because this means less wage discrimination for them. Pay equity legislation, higher union density and policies that help workers balance family needs with work make pay more equitable in the public sector.”

References


http://www.commonwealthfund.org/publications/fund-reports/2014/jun/mirror-mirror
Between 2010-2012, as part of our global migration project, Public Services International (PSI) carried out a mapping and participatory research in pilot countries in Ghana, Kenya, South Africa, Australia and the Philippines on the impact of the migration of health and social workers. Utilising a peer-to-peer research methodology, trade union members interviewed a total of 1,941 health and social care workers who were either migrant workers, returning migrant workers and those thinking of migrating. The majority of interviewees were in the age groups that typically migrate: one-third were in the 26-35 year age group, one-quarter were in the 36-45 year age group. Eighty-one percent of interviewees were female. Along with the research, the unions carried out outreach, information drives, public debates on the pros and cons of migration and awareness-raising on workers’ rights. The research and campaign activities generated an evidence-base, with the following findings:

1. Critical problems that need to be addressed in order to reduce outward migration are: insufficient staffing, lack of decent pay or a living wage, poor working conditions, lack of social protection, poor working environment, lack of job satisfaction, and absence of opportunities for career progression. A majority of health workers spoke of not being valued, while continuing to face levels of stress, violence and associated risks. If conditions are improved, a majority of the health workers prefer to stay in their home countries.

2. On the factors influencing decisions to migrate: The uncertainty of the recruitment process, unethical practices by recruiters, difficulty and emotional costs involved in leaving family and children behind, costs involved in migrating, lack of practical support or information from the government.

3. Collective bargaining is central to reducing outward migration. In countries with relatively higher trade union density, such as South Africa (40%) and Ghana (68%), trade unions have successfully negotiated pay agreements and are able to reduce outward migration. In countries where collective bargaining is weak, such as in the Philippines where union density is only 24% in the public sector and the right to negotiate wages and related provisions under the collectively negotiated agreements is restricted, outward migration of health workers is very high.

4. Human resources for health: Trade unions play a key role in social dialogue and negotiation to address health staffing needs, including involvement in implementation of bilateral labour agreements.

5. Unethical recruitment practices: Migrant health workers complained of excessive recruitment and placement fees paid to recruitment companies and agents. Many did not know what they were paying fees for. Contractual agreements were violated upon
arrival in the destination countries, (e.g. lower levels of pay, different working time and shift arrangements). There is lack of information about contracts and working conditions, and lack of practical support, including accommodation and food on arrival. Recommendations: (1) Continue to address the challenges of labour migration in the health and social care sectors taking into account demographic trends, shortage of health workers, working conditions and promoting ethical recruitment practices based on international human rights norms and labour standards. The UN Migrant Workers Convention, the ILO Conventions on Migrant Workers (C97 and C143) provide the most comprehensive normative framework on labour migration and must be ratified and implemented fully. States must not be allowed to rescind from their international obligation under the 1951 UN Refugee Convention. (2) Promote the implementation of the WHO Global Code of Practice on International Recruitment of Health Professionals. (3) Reduce the cost of migration on the health workers. The first step is to prohibit the imposition of recruitment fees on migrant workers, in line with ILO Convention 181. (4) Ensure access to social protection for migrant workers. (5) Ensure their right to organize and join unions. (6) Recognise and address the gender dimension of migration, given that of the 244 million international migrants in 2015, about half of them are women. Women’s contributions to the healthcare labour force deserve particular attention. Continue to promote policies on gender equality and non-discrimination, address violence at home and the workplace and promote access to social policies and public services.

References
Public sector provision is the only way to ensure universal health coverage. A lack of public sector provision makes it difficult for all citizens to access adequate healthcare. When there is a lack of public provision, people either have to pay for healthcare or are unable to access healthcare because of lack of income. Throughout the world, countries have increased the share of ‘out-of-pocket’ spending in total health expenditures. Individual households have to pay more directly for medicines and healthcare treatments. This has important implications for households because a decision whether to access healthcare will be determined by whether they have enough money to pay rather than their healthcare need (Ogloblin, 2011). Only very small increases in fees can result in a decrease in service use by poor households. This reduced access to healthcare results in worsening levels of ill-health and higher mortality rates (Sachs, 2012). Figure 1 shows that higher out-of-pocket spending as a % of GDP results in higher levels of infant mortality.

Figure 1: Infant mortality rate and private out-of-pocket spending on healthcare as % of GDP Y (vertical) = rate of infant mortality (deaths of infants under 1 year per 1,000 live births)X (horizontal)= private out of pocket spending on healthcare as % of GDP(188 countries, W database indicators SH.XPD.PUBL.ZS, SP.DYN.IMRT.IN, SH.XPD.OOPC.TO.ZS)Surveys in eighty-nine countries, both low and high income, covering 89% of the world’s population, suggest that 150 million people globally suffer financial catastrophe annually because they have to pay for health services (Xu et al, 2007). Financial catastrophe is defined as financial ruin caused by having to pay for the costs of healthcare. Households may have to pay for initial consultation fees, diagnostics costs, drugs or hospital costs. People are affected by financial catastrophe as a result of paying for healthcare in both high and low income countries. This is a very significant finding for countries with high levels of ‘out of pocket’ payments. It is only when ‘out of pocket’ payments fall to below 15-20% of total health expenditures that the rates of financial catastrophes and the subsequent impoverishment falls to low levels (WHO, 2010). Countries with higher rates of inequalities between households were associated with higher rates of financial catastrophe. Governments that do not try to reduce income inequalities are also less likely to reduce the risks of financial catastrophe (Xu et al, 2007). However, the type of government intervention has an impact on how effectively people can be protected from financial catastrophe as a result of paying for healthcare.
services. Insurance schemes that cover medicines and out-patient care rather than just hospital costs are more effective in reducing the number of people falling further into poverty (Shahrawat and Rao, 2012). Individual countries that have recently introduced universal coverage show that government investment results in better health outcomes. Thailand introduced a ‘30 baht health card’ that allowed low income, previously uninsured groups, to use public facilities without charge. Public health facilities were funded so that they could deal with increased demand for health services. More people changed from private to public healthcare and most importantly, rates of infant mortality were reduced (Gruber et al, 2012). The share of ‘out of pocket’ payments for health care and the share of households experiencing catastrophic spending on health care was reduced between 2000-2006. The provision of public sector healthcare services made a major contribution to improved access to health care by low income groups (Limwattananon et al, 2011).

References
Healthcare and sustainable health care are a crying universal need. Their provision would help save emotional turmoil, and countless lost hours of productive human life. In particular it would help significantly to save the loss of children’s and women’s lives. Problem: The problem worldwide is inadequate funds and resources to develop, educate and maintain a stable, well trained and appropriately qualified workforce for the healthcare sector. Principle: A well-trained and appropriately qualified workforce for the healthcare sector for the provision of health and well being to the global population and thus meet the needs of sustainable development goals. The UN and the WHO have outlined new goals for Health, i.e., the reduction and ultimate elimination of Non-Communicable Diseases ("NCDNeed: NCD are a global problem, While developed countries have the infrastructure and workforce to deal with them, low and middle income countries ("LMG") do not. In fact, some of the LMG have lost the bulk of their health workforce over approximately the last 20 years, due to the migration of that workforce to developed countries. Solutions: Therefore, the solutions must consider the above-mentioned fact. At present, many governments send their best and brightest individuals to other countries for training, without making adequate investment into their own local healthcare infrastructure. Consequently, these trained individuals return feel lost in an inadequately equipped system The result is that these individuals often move to countries where their training is better utilised. The need is for a multipronged approach to: a. tackle the development of the health infrastructure; and develop a long term plan for health for the needs of the region/country, for infrastructure, and for human resources. Current approaches: The national/regional governments fund the whole programme. Clearly this requires significant financial inputs. There are many innovative approaches that can be utilised: (1) The aid of organisations such as the: Commonwealth Fund – e.g., the All India Institute of Medical Sciences, New Delhi. (2) Public Private Partnerships (3P): Here, the government (or Public) partners with Private enterprise to build the infrastructure for healthcare, at the city, district or small town level. The government can then lease or purchase the physical plant or infrastructure from the private group. Thus, it can own it in about 20 years. This avoids massive, one time outlays of funds and provides the structure for Sustainable Health Care, much sooner than the single payer system (government), could have managed. (3) Social Organisations, such as religious institutions could be allowed to build not-for-profit, health care infrastructure and run it for many years. In such a construct,
the religious backers must be convinced that access to healthcare should be available to all individuals regardless of faith. The challenge could be that they favour people of their own faith, both for staffing and patients. Further, while they may provide access to all, they may still favour patients of their own faith by either establishing a tiered fee structure wherein those of the faith of the institution pay little or no fees and those outside the faith pay a higher user fee.

(4) Other organisations: Other groups could participate by setting up the Health Care Organisations (“HCO”) and charging user fees. This is being done by private industry and also by expatriate nationals who have lived abroad; succeeded; and returned to their home country to assist their countrymen. This may be: a) A philanthropic effort with: i) no user fees, ii) user fees, or iii) user fees with a provision for the treatment of individuals who cannot afford to pay for their care; b) Not for Profit: the user would then pay an appropriate fee, but less than a for profit; ora. For Profit: the HCO provides quality care, but at “market rates”. c) Micro Bank Sponsorships: The Microbanking sector could sponsor small HCO facilities in small centers. These facilities would provide planned care only, without emergency services, and with limited diagnostic and laboratory services; limited staff and with a single shift of staff. The result is that costs would kept down for the small facility. This is a good way to provide “entry level” care or Primary Health Care. At a later stage this degree of care can be expanded and built up to the next level. Health care and sustainable health care should be a birth right, not something left to chance, and not based on the accident of an individual’s geographic location at birth.

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What are the social and economic costs of inaction in the health and social sector labour market? / Submission by Public Services International Health workforce growth: attending to employment and working conditions. On the basis of its multiple streams of monitoring of working conditions of health workers, the European Agency for Safety and Health at Work provided the following overview of conditions for healthcare workers as compared to workers in other sectors in 2014:

1. Health and social care workers had the fourth-highest rate of serious work-related health problems in the preceding 12 months, just behind industries such as manufacturing and construction;
2. Women in the health and social work sector were more likely to have had one or more than one accident or to have suffered from an occupational disease than women working in other sectors;
3. Work-related stress, violence and harassment are recognised as major challenges to occupational safety and health. All of these psychosocial risks are of greatest concern in health and social work, followed by education and public administration;
4. Exposure to biological and chemical risks is most prevalent in the healthcare sector, where workers frequently have to handle cytotoxic medicines, infectious materials as well as the chemicals that are used to disinfect instruments and the workplace;
5. For posture-related risks, the healthcare sector is in fifth position, after construction, agriculture, industry, and wholesale, retail, food and accommodation;
6. The prevalence of stress and anxiety was high in the sectors ‘education’ and ‘health and social work’. Workers in this sector often experience stress and anxiety, even though it is not the most serious work-related health problem reported in the sector;
7. Studies conclude that various occupational health and safety factors negatively influence retention of highly skilled healthcare professionals, including physical loads and the work environment, as well as issues of organization and management structures and the shortage of healthcare workers;
8. The prevalence of stress and anxiety was high in the sectors ‘education’ and ‘health and social work’. One of the key issues is the perceived inability to deliver adequate care and attention to patients in need;
9. Studies conclude that various occupational health and safety factors negatively influence retention of highly skilled healthcare professionals, including physical loads and the work environment, as well as issues of organization and management structures and the shortage of healthcare workers. The situation with respect to the working conditions of healthcare workers is worse in developing countries. A stark illustration of this was provided in the three countries most affected by the EVD outbreaks in 2014, and their high levels of
infection and exceptionally high fatality rates of health workers. A survey of the working conditions of about 220,000 healthcare workers in the three countries – Guinea, Liberia and Sierra Leone - and neighbouring Nigeria - carried out by Public Services International (PSI) between 18 and 25 August 2014 revealed that the health workers of the region faced the successive EVD outbreaks with virtually none of the equipment and supplies required to prevent transmission. The questionnaire administered by local PSI staff to the region’s health sector unions enquired about the level of knowledge, sources of information and information needs on Ebola; on the availability, item by item, of equipment and protective measures practised to apply Universal Precautions; on the availability, item by item, of equipment and protective measures practised to apply the higher levels of protection recommended for Ebola; and the staffing levels and staff losses to EVD, due to disease and death. The responses revealed that health sector workers had sufficient information on the whole, but had a drastic lack of equipment across the board: either to apply Universal Precautions or, even more so, to protect themselves from EVD. They reported, however, a high level of practice of behaviours to protect against transmission of blood borne diseases, notably compliance with guidelines on hand washing and to avoid needle-stick and sharps injuries (such as non-recapping and appropriate disposal). Responses also revealed that healthcare workers experienced weak administration of their services as well as the overall lack of resources. The healthcare workers of the region were competent, but they were ill-equipped and poorly led. There is now a growing research literature on the consequences of working conditions on healthcare workers, and the implications for the morbidity and mortality of patients, much of it international and comparative in scope. The evidence shows that healthcare workers are systematically exposed to occupational health risks globally. Furthermore these risks not only damage to the healthcare workers themselves, but also have negative consequences for the health of populations: negative health outcomes include demonstrably higher morbidity and mortality of patients. Important consequences of occupational health and safety risks in the health workplace are absenteeism and resignation, which then acutely or chronically worsen healthcare worker shortages and overload, compounding the problem and further lowering the quality of health services. Yet it has been shown that adapted ratios of patients to healthcare workers, or patient quotas, greatly improve the working conditions of healthcare workers and the resulting health outcomes for patients.

References


[3] See especially Figure 60.1 that illustrates the global distribution of the fraction of Hepatitis C Virus, Hepatitis B Virus, and HIV Infections in healthcare workers attributable to injuries with contaminated sharps, at http://www.ncbi.nlm.nih.gov/books/NBK11750/

[4] Major research on the topic has been carried out in many countries, but


evidence, issues and opinions in health care, Issue 34, March 2012 (2 pages);
Submission 75

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Submission on Public-Private Partnerships (PPPs) in health services by Public Services International linked to the conditions needed for investment in employment in the health and social sector to achieve Universal Health Coverage and produce inclusive economic growth. PPPs in health services PSI proposes to avoid the promotion of PPPs for the provision of health care, while attempts at establishing standards for PPPs in health should be inclusive of all governments (including local authorities) and the major stakeholders (users of health services, health sector workers, and others). PSI also proposes that criteria be established for the evaluation and periodical review of existing PPPs in health. A February 2016 paper by UN-DESA, “Public-Private Partnerships and the 2030 Agenda for Sustainable Development: Fit for purpose?”, indicates that “PPPs are generally better suited for economic infrastructures such as transport and electricity, where demand is relatively steady and the impact on service quality easy to assess, and where better quality infrastructure can lower cost at the operational stage. However, they are less likely to deliver efficiency gains in the social sector such as hospitals and schools where access and equity are major concerns”. It also calls for an inclusive multi-stakeholder setting, such as the follow up process to the Third International Conference on Financing for Development that would involve UN Member States, civil society, the private sector and other stakeholders for the development of guidelines for PPPs. This is in sharp contrast with the on-going work on a UN-ECE PPP standard for health, which has been conducted very quickly, with little stakeholder participation, other than a significant presence of private health providers (service, product and finance companies). The report “Why Public-Private-Partnerships Don’t Work” by Public Services International Research Unit (PSIRU) assesses the PPP experiences in countries both rich and poor. It concludes that PPPs are an expensive and inefficient way of financing infrastructure and services, since they conceal public borrowing, while providing long-term state guarantees for profits to private companies. Eurodad, the European Network of Debt and Development, looks at the empirical and theoretical evidence available on the nature and impact of PPPs, and analyses the experiences of Tanzania and Peru. The report finds implementing PPPs poses important capacity constraints to the public sector, and particularly in developing countries. PPPs suffer from low transparency and limited public scrutiny, which undermines democratic accountability. India has the greatest number of PPPs of any developing country, in a range of sectors. By the end of 2012 there were 758 PPP projects under way or complete, worth $70 billion. But there are already problems with current PPPs and private provision of healthcare in India. The state of Chhattisgarh has halted a PPP project to outsource diagnostic services, following months of opposition. A review team from central government “found that there are many problems in implementing the plan and that outsourcing
diagnostic facilities is not the best option.... The team observed that the PPP model has a possible risk of false claims, denial of services and unfair intervention... [and] also carries the possible risk prescription of unnecessary tests. Nearly 1 million cases of tuberculosis are missed every year in India, mainly because private hospitals fail to carry out the procedures recommended by the WHO and endorsed by the Indian government. This “undermines efforts to control the disease” which causes 270,000 deaths per year in India alone.

Sanitation is the greatest medical milestone of the last century and a half, according to a poll carried out by the British Medical Journal. Sanitation was the clear winner among 15 milestones shortlisted by readers of the journal, including the development of vaccines, which has safeguarded many children’s lives, and the invention of the contraceptive pill, which was a contributory factor to significant social change. PPPs in water and sanitation have led to negative outcomes worldwide, which in turn has led to the re-municipalization of these services and reversal of privatization and PPP arrangements. In South Africa, in 1999 in Mpumalanga municipality of Mbombela, a 30-year concession was given to a private company registered in the Netherlands to provide water. The Greater Nelspruit (Mbombela) Utility Company would finance its operations by collecting money from those who purchased its water. A World Bank review of the scheme published in 2012 said water access had grown from 45% to 95% in that time. The municipality’s water and sewerage treatment plants had also been consistently awarded Blue Drop and Green Drop status. The bank said: “Water and sanitation services in the concession area are in a much better condition than if the municipality had continued to operate them directly.” But it also found that 68% of households did not have a 24-hour supply of water. There had been no investment of shareholder funds in infrastructure. When communal taps were replaced by a prepaid metering system people were forced to turn to rivers for their water, leading to disease outbreaks.

References
Pathology is implementing major changes in diagnostic approaches as technology advances in every area of the discipline: biochemistry (chemical pathology), hematology including transfusion medicine and immunogenetics, microbiology, and anatomical pathology. The move to large automated central laboratories is balanced by the availability of point-of-care testing for rapid on-site needs. Digital technologies and internet connectivity allow faster access to specialized expertise for interpretation of laboratory data. The challenges involve international standardization, patient privacy and quality assurance. Chemical pathology Autoanalyzers automated traditional manual analytical steps in chemistry laboratories, allowing rapid testing of high volumes of samples for multiple analytes. Pre-analytical (sample identification, sorting, and centrifugation) and post-analytical (specimen storage and archiving) processes have also been automated by robots connected on tracks, linking all modules, from routine chemistry and immunooassays to liquid chromatography-mass spectrometry in total laboratory automation configurations. (1) Informatics “middleware” interfaces analyzer software to laboratory information systems (LIS) and/or hospital information systems (HIS), and these analytical results now constitute a major component of the electronic medical record (EMR). Hematology, transfusion medicine and immunogenetics Automated hematology using optical and/or impedance-based methods based on the Coulter principle can enumerate and evaluate blood cells with accuracy, precision, and speed. (2) The detection of abnormal blood cell populations is transitioning from manual microscopy to automated digital analyzers that can provide accurate differential counts and identify abnormal cells for pathologist verification. (3) High-throughput multiplex blood group molecular typing platforms support extended transfusion donor/patient matching by detecting common blood group polymorphisms and rare alleles of blood group antigens. The widespread application of high-throughput molecular typing improves blood matches, especially for highly-sensitized multiply-transfused patients. Next-generation sequencing (NGS) provides more comprehensive information of genetic variations for more sophisticated blood group genotyping assays. (4) Histocompatibility testing for solid organ and hematopoietic stem cell transplantation is also transitioning from labor-intensive serologic techniques to DNA-based molecular typing and solid phase immunoassays, increasing the number of HLA alleles from a few hundred to >6000. HLA-antigen antibody specificities have reached the level of individual epitopes. As studies clarify ambiguities in allele assignments and the significance
of extremely low levels of HLA-specific antibodies, NGS methods may prove to be an ideal mechanism to predict transplant outcomes. (5) Microbiology

Technologies for rapid microbial identification are revolutionizing clinical microbiology. Commercial fluorescence in situ hybridization (FISH) tests, mass spectroscopy and automated polymerase chain reaction-based systems allow rapid species identification and antibiotic resistance markers of microorganisms. These tests that are in use for blood cultures are now being developed for application to whole blood samples to identify and characterize bloodstream pathogens in hours rather than the days that are traditionally required for culture-based analysis. (6) Anatomical Pathology

Anatomical pathology has moved from the autopsy to surgical pathology and cytology. As samples get smaller, the amount of information required from each sample is growing exponentially. The need for proteomic biomarkers and the development of molecular targets for precision medicine is prompting the development of multiplex immunohistochemical and FISH testing for small biopsies. (7) NGS performed on formalin-fixed, paraffin-embedded tissue samples is transitioning the pathologist into the data integrator of results of analysis of DNA, RNA, protein and morphology. The disruptive technology of digitizing glass slides at high resolution and in three dimensions will move pathology away from the microscope and into the internet where expert interpretation can be obtained virtually anywhere in the world in minutes. (8) As slides are digitized, algorithms are being developed and computer-assisted diagnostics will integrate morphology and biomarkers. (9) Models of diagnostics: Automation will evolve large clinical laboratories for complex testing. In concert with centralization, simple but frequent tests are being applied at the point of care with new technologies that are becoming available on mobile devices. (10) In the future, in-vivo analysis of blood cells and tissues using novel technologies such as Raman spectroscopy and Optical coherence tomography (OCT). (11) may allow non-invasive visualization of disease at the microscopic level outside the traditional laboratory. The challenges: to ensure subjection to the same quality assurance as current laboratories to avoid errors. (12) As with traditional laboratory processes, there will be an increasing need to ensure standardization and comparability of the various devices. With internet-based diagnostics making the world smaller and expertise more accessible, the need for privacy compliance will be critical. When combined with better clinical education, improved imaging technologies and antibiotic stewardship programs, these laboratory advances have the potential to improve clinical outcomes and reduce healthcare expenditures around the world. Indeed, the future of pathology is limited only by the imagination and ingenuity of pathologists and laboratory scientists.

References

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missed every year in India, mainly because private hospitals fail to carry out the procedures recommended by the WHO and endorsed by the Indian government. This “undermines efforts to control the disease” which causes 270,000 deaths per year in India alone.

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[9] Down to Earth 30 November 2013 2.9 mln TB cases go unreported http://www.downtoearth.org.in/content/29-mln-tb-cases-gounreporte
### Submission 78

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<td>Federal Ministry for Economic Cooperation and Development</td>
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**Contribution**

We highly appreciate the opportunity to consider together with the UN COMMISSION ON HEALTH EMPLOYMENT AND ECONOMIC GROWTH options for effective promotion of employment and for creating productive and decent jobs for health. The health sector is not just only a service provider but also an important labour market and economic driver in many countries. Especially in high-fertility countries, mainly in Africa, as well as in countries with large populations, there is an increasing demand for health workers. As promoting employment for health is a complex task, an inter-sectoral approach addressing the current and future challenges in health and social security, education, migration, gender, sustainable economic development and employment, is key.

**Building National Capacities for Training and Improved Working Conditions for Health Workers**

1. **The challenge**
   - Health workers are at the heart of health systems and essential for achieving the health-related SDGs. At the same time, we face globally a great shortage of qualified health workers, particularly in Sub-Saharan Africa. Additionally, the epidemiological and demographic shifts intensify the demand for health and social care and affect the profile of the required workforce. To tackle the health workforce crisis we need:

   - increased education and training capacities,
   - revised (labour market-oriented) education and training models in cooperation with the private and public health service providers, integrating theoretical content and practical training relevant to the labour market,
   - improved retention mechanisms and management systems,
   - matching mechanisms of supply and demand,
   - better working conditions—transparency in international migration of health workers

2. In the last 3 decades international migration of doctors and nurses has increased. Despite the progress made, due to the WHO Code of Practice (2010), there is still a lively debate on the negative aspects of migration versus the individual rights of mobility of health personnel. It is timely to extend policy discussions from the issue of compensation and “brain drain” to innovative and global solutions: fair regulations for migration and transnational recognition of qualification. What the Federal Ministry for Economic Cooperation and Development is doing: The Federal Ministry for Economic Cooperation and Development supports measures to counter the shortage of qualified staff in a range of countries, mainly in Sub-Saharan Africa and Asia. It addresses, not only the sheer number of health workers needed, but also takes into account the skill-mix, competencies, motivation, performance and distribution. In spring 2015 German Federal Minister for Economic Cooperation and Development, Dr. Gerd Müller, launched the special programme “Health for...”
Africa” in response to the Ebola crisis. Funding for the programme is 600 million Euros for 2015-2019. The regional focus is on Ebola-affected countries and African countries with very weak health systems. As part of this special programme, human resources for health are being qualified on a broad level and their working conditions are being improved. Germany also supports the implementation of the WHO Global Code of Practice on the International Recruitment of Health Personnel (2010) in its own domestic labour market as well as in bilateral cooperation with its partner countries. Case study from Pakistan Creating a public health champion - The story of Pakistan’s Health Services Academy http://health.bmz.de/good-practices/GHPC/Creating_a_public_health_champion/index.html Over the past twenty-five years, Islamabad’s Health Services Academy grew from a small government in-service training centre into an autonomous academic institution renowned for its high-quality public health training. This case study looks at the way German Development Cooperation supported it on this journey.

References
Submission 79
Name/Position: Annegret Al-Janabi, Health Division
Position: Health Division
Organization: Federal Ministry for Economic Cooperation and Development
Country: Germany

Contribution: Case study
Question Answered: 7, 8, 9

Contribution: Good practices
1. Financing health workforce investments
Generating new jobs is not enough. Decent work conditions, including occupational health and safety standards for health workers as well as social protection mechanisms for those working in the health sector, are paramount. Besides their role in financing health services, social health protection mechanisms such as social health insurances, can protect health workers from the financial consequences of falling ill. Similarly, employment injury insurance schemes address the specific occupational risks health workers are facing in their – often risky – day-to-day work. Coherent social protection systems promote overall well-being of individual health workers and increase their motivation thus raising the productivity of the health workforce as a whole.

2. Education and training models for a fit for purpose health workforce
Up-to-date education and training models have to be geared towards the needs of public and private health service providers, combining practical training in e.g. hospitals with theoretical vocational education in training centers. The German experience with Technical and Vocational Education and Training (TVET) can be valuable in this matter, not as a blueprint but as a model for adaptation to the specific needs of the respective country. The advantages of the dual system is the on the job training and the fact that future employers contribute (financially) to and benefit at the same time from education and vocational training. Education and employment strategies for health workers should ideally be designed jointly by training institutions, health service providers and government to ensure alignment with needs in the health sector. University and hospital partnerships support the exchange between institutions in developing countries and European countries to provide direct professional and technical expertise through peer learning. Since 2007, on behalf of the Federal Ministry for Economic Cooperation and Development, the German development agency GIZ has been coordinating the European ESTHER Alliance (EEA) initiative for Germany. The initiative is bringing together experts from universities and hospitals from both Germany and low- and middle-income countries to strengthen health services in partner countries. Through the partnerships experts in the partner countries broaden their knowledge and obtain access to new methods and techniques, while the German universities and hospitals extend their network of research partners. Knowledge transfer is encouraged through training, temporary placements and staff exchange between partner countries and Germany, as well as through relatively small-scale accompanying research
projects. 3. Multi-sectoral response for promoting employment

The integrated approach for promoting employment offers another opportunity to the health sector. One of the three core elements of this approach is the establishment of effective labour market services. In many countries national platforms for jobs in the health sector are missing. The existence of productive jobs and qualified workers does not, in itself, guarantee more employment if there is a shortage of labour market information and a mismatch between labour supply and demand.

To improve job placement, German development cooperation is assisting partner countries to develop and apply active labour market policy instruments. This includes supporting labour market analysis, establishing labour market information systems, and providing advice on the conceptual development of career counseling, guidance and job placement services.

4. Optimising benefits and reducing harms arising from international mobility of health workers

Fair and transparent cross-border mobility is key for optimising the benefits for source and destinations countries as well as for health workers. Sustainable solutions that do not put a financial burden on the health workers and are in line with the WHO Code of Practice are so far very rare. To enhance international accessibility to the health labour market, better guidance / regulation mechanisms for migration as well as increased flexibility in procedures for accreditation and qualification or recognition is needed, coordinated by an international authority or agency. Bi- or multilateral Skills Partnerships or training partnerships between low- and middle-income countries and high-income countries with private sector engagement (e.g. public-private-partnerships) to support the qualification of health workers (quality and quantity) and their international mobility can contribute to fair and transparent cross-border mobility. Country example for cross-sectoral collaboration: Liberia

The immediate impact of the Ebola crisis on the Liberian health system was very high, including a palpable reduction (184 deaths) of the already understaffed health workforce, which resulted in the breakdown of some health services and a high additional burden on remaining staff and the health budget. In support of the medium and long-term recovery strategy of Liberia, the BMZ commissioned three projects which complement each other in the areas of education and health. Thus the projects contribute to the availability and quality control of severe infection and treatment units, as well as to adequate staffing of the units through a TVET programme in health (with a specific focus on women) and an improved and decentralized HR-Management which is developed together with the Ministry of Health.

References

Submission 80

Name/Position  Carolyn Moore, Program Officer
Organization  mPowering Frontline Health Workers
Type  International NGO
Country  United States of America

Name  Mike Bailey
Organization  mPowering Frontline Health Workers
Country  United States of America
Contribution  Opinion

mPowering Frontline Health Workers recommends that large-scale distribution of mobile training content be considered a key element of education and training models for current and future health workforces. Frontline health workers and community health workers (CHWs) bolster health systems facing severe shortages of health workers. These health workers provide essential maternal, newborn, and child health surveillance and treatment to millions. Existing research on training for frontline health workers indicates that it is widely insufficient, incomplete, and inconsistent within and across countries (mPowering, 2014). For example, CHW training is often inaccessible, ineffective, and offered only at the beginning of a CHW’s tenure (mPowering, 2014). As task shifting is an increasingly common means of adapting to workforce shortages, community-level cadres have a critical need for training as they absorb additional responsibilities (Kibwana et al, 2016). Lack of high-quality training means that large numbers of health workers lack the information and skills they need to perform their work to the highest quality possible; this is compounded by high patient case loads and increasing clinical responsibilities. A United Nations review of CHW training content recommended a core training resource package to streamline existing training content and fill gaps where content does not exist (Tran, Portela, De Bernis, and Beek, 2014). Stakeholders have called for a set of global CHW content that could be adapted, customized, and integrated into countries’ training programs (mPowering, 2015). In response, mPowering developed a global repository known as ORB to provide high-quality, openly licensed training content for training institutions, governments, and health workers. Concurrently, the World Health Organization is performing a review of CHW competencies to produce guidelines for CHW roles. A critical next step will be the development of corresponding training materials, which can be shared globally, and adapted and implemented by Ministries of Health to correspond with national CHW roles. The fragmentation and lack of scale for mobile health (mHealth) training implementations is well known, despite the increasing affordability and accessibility of smartphones. Perhaps the first priority in the pursuit of future mHealth implementations is the assurance that scale, sustainability, and quality assurance are achieved. A scalable, sustainable content delivery process would allow training to reach health workers who currently don’t have access to training. Governments and stakeholders will be able to send quality-assured, relevant, and adaptable content to health workers and community members at an unprecedented pace and scale. In the spirit of the UN Delivery as One initiative,
mPowering is supporting multiple WHO member states to deliver training content through an initiative designed to provide digital content delivery on a national scale. This will be achieved through the implementation and refinement of a process known as Open Deliver. Open Deliver is a process based approach towards digital content design, development and delivery that provides a national health workforce with an inexpensive means of accessing on-demand training information. This model follows five steps: 1. An initial assessment to determine health workers’ learning needs; 2. Identification of training content; 3. Curation and sharing of training materials on a single shared platform, 4. Organization of training materials into courses or training packages; and 5. Distribution to health workers on a range of mobile devices. Open Deliver streamlines digital content delivery through the reconfiguration of existing technologies into a single, integrated, platform. This allows governments to assure the quality of all content used in the system. The process can accept multiple streams of content from different providers, and all providers are able to access the content sharing platform to ensure new content development is not duplicative. Utilization of mobile technology for health worker training also allows for the collection of analytics to evaluate which training materials and methods are most effective. This in turn allows training institutions and governments to target resources towards the training that will have the largest impact on service delivery and health outcomes. With the institutionalization of Open Deliver, governments and stakeholders will be able to send quality-assured, relevant, and adaptable content to health workers and community members at an unprecedented pace and scale.

References


Submission 81
Name/Position  Cheryl Stadnichuk, Senior Research Officer
Position Senior Research Officer
Organization Canadian Union of Public Employees
Organization Type Health Professions Association and Union
Country Canada
Contribution Evidence
Question Answered 1, 4, 6

Contribution Evidence on the importance of publicly funded health care on health employment

This book is part of a major international research project where 26 researchers are reviewing practices and funding for long term care facilities in Canada, the United States, the United Kingdom, Germany, Sweden and Norway. Promising Practices looks at the factors that impact quality of care and concludes that having permanent, unionized staff and high staffing levels results in better quality of care. They Deserve Better: The long term care experience in Canada and Scandinaviat [https://www.policyalternatives.ca/publications/reports/they-deserve-better](https://www.policyalternatives.ca/publications/reports/they-deserve-better)

This book, from the same research team as above, compares long term care facilities in Canada and Scandinavian countries and shows how higher staffing levels in long term care facilities provides better working conditions and quality of care to residents.

This report looks at the impact of gender inequality on employment and fair wages. The report states that “women are good for economic growth but this does not necessarily mean that economic growth is good for women.” This is because, with increasing global inequality and concentration of wealth, women are more likely to work in part time and precarious jobs. The experience of high-income countries is that higher levels of education and access to public services increase women’s level of paid work.

This report from the Canadian Centre for Policy Alternatives analyzes the wage gap for historically-discriminated groups (women, racialized and Aboriginal workers) and finds that the wage gap is lower in the public sector than in the private sector. The key elements to less discrimination in the public sector are: higher rates of unionization, family leave benefits and legislated pay equity.

This submission to a Standing Committee on Health in British Columbia discusses the importance of interdisciplinary teams in health care, especially for remote communities. The submission cites conclusive international evidence showing that countries with a strong primary care orientation have lower health care costs, less medication use, better health outcomes and reduced health inequities. Yassi A, Hancock T. (2005) Patient safety--worker safety: building a culture of safety to improve healthcare worker and patient well-being. Healthcare Quarterly. 8 (32) : Spec No:32-8, p.35.


http://www.longwoods.com/content/18668

Short Term Gain for Long Term Pain: The Privatization of Hospital Laundry Services in Saskatchewan


This report analyzes the impact of privatization of hospital laundry services and how good paying jobs in small communities, held primarily by women, are replaced with poverty level employment.

The Pains of Privatization: How Contracting-out Hurts Health Support Workers, Their Families, and Health Care


This report provides a gender analysis of how privatization of good paying jobs in support services in health care in British Columbia have impacted mostly women and racialized workers. Under private multinational corporations, the wages were poverty-level, workload increased, there was inadequate staffing and high work-related illnesses and injuries, inadequate training and therefore poor quality of services.

The Hidden Cost of Health Care Wage Cuts in BC


This is a companion piece to The Pains of Privatization. The report examines the personal, family and organizational impact of massive wage cuts to health care workers in British Columbia. It shows a negative impact on the recruitment and retention of workers and that many workers were forced to find additional jobs to make up lost income.

Major Complications: The TPP and Canadian Health Care


This recent report from the Canadian centre for Policy Alternatives looks at the possible impact of the Trans Pacific Partnership trade agreement on Canada’s public health care system. The overarching impacts of the TPP would weaken our public health care system, undermine health regulation and obstruct efforts to renew and expand public health care. One example is the Investor State Dispute Settlement mechanism would make a proposed national publicly funded pharmacare plan more difficult and costly to implement.

References

As Above
Global Health Workforce Imbalance

The global shortage of skilled healthcare professionals is nothing new. A decade ago, the World Health Report, entitled “Working Together for Health”, emphasized that the critical shortage of healthcare workers was hampering the delivery of much-needed services (WHO 2006). Some progress has been made since the publication of the report both at the global and country levels to address the shortage of healthcare workers. Nevertheless, according to WHO, a global shortage of 7.2 million health workers remains, with 83 countries facing a health worker crisis (WHO 2013). However, the term “shortage”, as it relates to the human workforce, does not depict the whole picture. First, the notion of shortage is relative. What is considered shortage in Europe or the USA, might be viewed as normal in countries with the lowest number of healthcare providers. Second, the term is often misused to mean imbalance rather than shortage in absolute numbers. The health workforce imbalance is a major challenge in rich and poor countries alike and may refer to the following: Profession/specialty imbalances – refers to imbalances in various health professions, such as doctors, nurses, dentists or pharmacists, as well as shortages within professions, such as, for example, shortage of workers in one or more specialties. Geographical imbalances – refers to disparities between urban and rural areas, or rich and poor regions. Institutional and service imbalances – refers to differences in health workforce supply in health facilities and services. Gender imbalances – refers to disparities in female/male representation in the health workforce (Zurn et al. 2004).

Universal Health Coverage (UHC), SDGs and an Economic Case for Investing in the Health Sector

Universal health coverage will remain unattainable without an adequately resourced health labor force. Countries that invested in health workforce development, such as Brazil, Chana, Mexico and Thailand, were able to achieve better health outcomes. There is also evidence of a positive correlation between health workforce shortages and higher maternal mortality ratios (Scheil-Adlung 2015). An economic argument on the benefits of investing in the health sector goes beyond the high returns on investment in terms of improved health outcomes and the resulting higher labor productivity. The health sector is also the single major contributor to employment, employing about 59.2 million workers worldwide. This number includes over 39.5 million healthcare providers and approximately 19.5 management and support workers (Dal Poz 2007). When the European Union lost more than two and a half million jobs between 2008 and 2011, the health sector generated over 2.8 million new jobs during the same
period (European Commission 2013). Building on the lessons learned from the MDGs, the new development agenda presents an opportunity to explore the interactions between the UHC paradigm and the current workforce challenge to design strategies that will improve the availability, accessibility, acceptability, quality and productivity of the health workforce (WHO 2013). However, a long list of goals (17 Sustainable goals) and targets (169 targets) also presents challenges to their implementation. Currently, there is only one SDG sub-target – 3c – that refers to healthcare workers: “Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States” (UN 2015). While there is consensus that an investment in high-skilled healthcare professionals yields high returns, the agreement on what constitutes a “substantial increase” and how to measure the 3c target is lacking (Shapovalova, Meguid, Campbell 2015). More importantly, the “substantial increase” does not address the workforce imbalance issues, such as the fact that 52% of the global population live in rural areas and are excluded from health services due to staff shortages (Scheil-Adlung 2015).

Way Forward

With a growing ageing population, an ageing workforce and an increasing demand for high-quality health services, strategies and policies should be developed to retain qualified healthcare workers as well as to accommodate their changing abilities. The shortage of specialists trained in geriatrics also needs to be addressed. For example, it is estimated that of the 650,000 licensed physicians practicing in the United States, less than 9,000 have met qualifying criteria in geriatrics (Kovner et al. 2002). Correcting the health workforce imbalance is a complex issue and will require the involvement of various stakeholders at multiple levels to address it. Political and technical leadership will be needed to seize the momentum and “accelerate progress on UHC through transformative action on human resources for health” (WHO 2013). The involvement of professional associations earlier in the process through their policy and advocacy efforts will be critical as well to mitigate the impact of health workforce imbalances and accelerate progress towards UHC.

References


[14] WMA Declaration of Oslo on Social Determinants of Health The World Medical Association (WMA) The World Medical Association is an international organisation representing more than 9 million physicians of all specialties and sectors. It was founded on 18 September 1947, when physicians from 27 different countries met at the First General Assembly of the WMA in Paris. The organisation was created to ensure the independence of physicians, and to work for the highest possible standards of medical care, ethics, education and health-related human rights for all people, at all times. The WMA has 111 Medical Associations from all over the world as its constituent members. The WMA offers Associate Membership to individual physicians.
Submission 83

Name/Position: Roberto Verna, Professor
Organization: World Association of Societies of Pathology and Laboratory Medicine
Type: Opinion
Country: Italy

Contribution: Pathologists and Laboratory Physicians help early diagnosis, correct therapy, healing and reduction of sanitary expenses. They may have a pivotal role in Education to Health. Physical exercise is fundamental for maintaining and improving health, together with nutrition, to generate a correct lifestyle. Nowadays, the role of physical activity in the prevention of many diseases and in the improvement of sick people is now widely recognized. Furthermore, it should be considered that kids get a great benefit from physical activity also in terms of their psychic maturity. Pathologists and Laboratory Physicians actively contribute to the definition of health parameters, especially in terms of prevention; an increase in the number of Pathologists and Laboratory Physicians helps the management of public health. In addition, the research on the metabolic and pathophysiological aspects of physical activity, where athletes are young, healthy and efficient, in medicine can be used to set benchmarks for the whole population. From the point of view of public health, we must also consider that the school medicine and military medicine, for long years were an important bulwark for the identification of many metabolic diseases, particularly those at slow-onset. Currently, the lack of a nationwide school and military medicine, at least in Italy where the military service is voluntary, makes the prevention seriously compromised. An early detection of many diseases, in fact, if cannot lead to their elimination, can at least lead to a delay in the onset of complications and contribute greatly to improving the quality of life of patients, strongly reducing public expenditure required for treatment. Under this aspect it is of pivotal importance also to know the damage caused by an incorrect nutrition and from alcohol dependence and the use of pharmacologically active substances. Great indeed is the spread of self-medication products in people who practice sports activities, most often without any medical supervision and only for "word of mouth". A widespread health education, proper nutrition and sport activities in school, could prepare new generations to a lifestyle that can certainly lead to a great saving on the part of the national health system. It would be therefore of great importance include, in school programs, the education to health. This simple action would increase the opportunity of employment for many medical doctors as well as to reduce the cost of health in the Countries. It is in fact universally recognized fact that a proper nutrition and a proper physical activity leads to a significant reduction of diseases, especially the endocrine-metabolic ones and obesity, the main non-communicable diseases that lead to cardiovascular diseases and diabetes. To enable such education sufficient skilled teaching staff is needed; in fact, the discussion and dissemination of the principles of health, proper nutrition and proper approach to sport activities to be carried out in a professional manner, with high expertise, by highly trained physicians. This is a perfect role for pathologists and laboratory physicians, so their number
should be increased. Steps of the action: (1) Courses for the education to health of scholars, their families and teachers. The courses will deal on the correct physical activity, the correct nutrition, the fight against alcohol and excessive self medication. The teachers must be Pathologists or Laboratory Physicians. (2) Increase the availability of sports facilities. This result may be achieved by increasing the availability of school sports facilities or helping schools lacking them, through agreements between schools and sports facilities close to them, such as municipal or private fields, so that kids, especially those between 9 and 13 years, may perform a physical activity controlled by certified trainers at costs accessible to everyone. This would allow students to make physical activity during the afternoon, after the lessons, at very low cost. If this is inherent to public structures, could be difficult for private structures. But the key is in the number; if for example a private sport center admits 100 children at a rate of 25 euros per month, the result is 2500 euros that can be used to pay an instructor. The result is that children pratice physical activity under control, the sport structure increases its income with the presence of children and their parents, parents are happy to have their children controlled. The overall health increases and the public health reduce its costs. Pathologists and Laboratory Physicians are of great importance since they will run a careful medical and laboratory examination that could confirm or exclude existing pathologies; in the case of pathologies, the subjects should be addressed to the correct physical recovery, while in absence of pathologies, the subjects will be addressed to the suitable physical activity.

References


CPME contribution to WHO Expert Group of the Commission on Health Employment and Economic Growth

The Standing Committee of European Doctors (CPME) represents national medical associations across Europe. We are committed to contributing the medical profession’s point of view to EU institutions and European policy-making through pro-active cooperation on a wide range of health and healthcare related issues. CPME welcomes the opportunity to provide a contribution to the reflection process launched by the Commission on Health Employment and Economic Growth. CPME has a long-standing interest in the discussion on the interface between economy and health. CPME is convinced that economic stability in both the public and private sector and sustainable high quality healthcare are mutually dependent. CPME would like to reiterate that investment in health and a healthy workforce is crucial to economic recovery and growth. In the context of the European Commission’s Europe 2020 strategy, CPME has repeatedly addressed the implications the economic crisis has on health, e.g. mental health, poorer health outcomes (namely due to stress, poor diet, etc.), as well as highlighting the role the health sector has in economic stabilisation and recovery in terms of employment and innovation. At the same time, CPME reaffirms that healthcare services and technology cannot be equated to services that are purely commercial in nature. Economic strategies must therefore respect the specificities of the healthcare sector and safeguard every patient’s access to healthcare including for patient groups with vulnerabilities. For instance, the increasing initiatives at CEN and ISO level to develop industrial standards interfering with healthcare services are therefore unacceptable. CPME reaffirms that health workforce policy must ensure safe, healthy and lawful working conditions for doctors and other health workers, and ensure that high quality practice is enabled throughout professional careers. This includes high quality education and training, adequate staffing levels and remuneration, and perspectives for professional development. CPME also underlines that all policy decisions must be based on the principle of improving the quality of and patients’ access to healthcare. Economic considerations may not take precedence over this principle. CPME is also committed to ensuring safe and responsible professional mobility. In accordance with their obligations under the WHO Global Code of Practice on the International Recruitment of Health Personnel, countries must desist from pro-actively recruiting doctors and other health workers from vulnerable countries but rather work towards self-sufficiency. At the same time, CPME underlines that privately, mobility is a doctor’s individual right and greatly benefits the individual and the profession as a whole. CPME underlines the key role of professional organisations in health
employment policy, including their role in the regulation of the profession. It is imperative to involve them in policy decisions throughout the policy process.

References

N/A
A call for an educational model of midwifery care

Maternal mortality has declined by 45% between 1990-2013, to an estimated 289,000 women still die during pregnancy, childbirth and postpartum period and is considered the highest health inequity in the world. Approximately 2.6 million newborns are stillborn each year and another 3,000,000 infants will die during the first month of life. There is increasing evidence that care provided by well- educated regulated and resourced midwives saves lives and an estimated 3.6 million maternal, fetal and newborn lives can be saved. Compelling evidence highlights the difference that midwives make to maternal and child health on a global level. Research has also shown midwifery services to be very cost effective and a vital solution to the provision of high quality maternal and neonatal care for all women, infants in all countries. Midwifery education is of critical importance in preparing midwives with appropriate competencies to provide high standard, safe, cultural sensitive, respectful and compassionate care, particularly in settings with limited access to other providers and services. ICM has recognized the need to harmonize midwifery education and regulation which has varied widely across all countries , , additionally, ‘there is diversity in the typologies, roles and compositions of health workers contributing to midwifery services’, many of whom ‘spend less than 100% of their time on sexual, reproductive, maternal and newborn health services’. With salaries ‘amongst the lowest in low and middle- income countries’, recruitment, retention and remuneration of midwives is challenging. There is no midwifery education without regulation. ICM has supported education, regulation and midwives’ associations to strengthen midwifery world-wide, including scaling up the number and capacity of midwives through Essential Competencies for Basic Midwifery practice , , the Global Standards for Midwifery Education , and Regulation , as has WHO. It is proposed to use those documents, in conjunction with the evidence-based framework for quality maternal and newborn care (QMNC) for workforce development and resource allocation, to provide an overall structure to endorse midwifery education programmes . It is argued that economic and political restrictions, to exercise the full scope of midwifery practice as well as social and cultural norms, mitigate against women’s rights, education and employment, given that women, as recipients and providers of care, comprise 99% of the midwifery workforce. Nursing and Midwifery Enterprises (NMEs) and midwifery and nursing education have been shown as ways to empower women and girls through improving educational levels and affording employment opportunities. Flexible career paths
and non-traditional points of entry, especially for health workers from rural and underserved communities, in order to complement existing modes of health-care worker education and deployment, can help to address health-care worker shortages. Better use of, and more investment should be targeted to, the blended approach to midwifery education, using mhealth to ensure future midwives acquire all the essential competencies and are enabled to practice the full scope of their profession. This could ensure access to quality education, for midwives living in remote areas, given that low-resource countries bear the brunt of the situation. Mhealth is an innovative tool that could also be highly beneficial in CPD programmes. Moreover, midwives must be prepared for leadership at all levels including clinical practice, education, regulation, government policy and research as midwives are strategically placed to support women. Political and financial investment and support is needed for midwifery education. Countries with leaders who show political commitment to reform have a better chance of moving and evidence has illustrated the important contribution of healthcare employment to the growth rate of manufacturing value added, to be significantly greater in magnitude than financial development. Political and financial investment should also go in literacy programmes profession and to reach a level of competency at par with other international midwives. Literate women are of prime benefit; to society given that they are the gatekeepers of the health of their families. Midwifery is pivotal to the system-level shift from MNC to the continuum of skilled care for all, within multidisciplinary teams and integrated across hospital and community settings. Midwifery is at a unique crossroad with regards to sexual, reproductive, maternal and neonatal health globally. To succeed a concerted effort among all the players involved is needed.

References
Confederation of Midwives: Global Standards for Midwifery Education (2010) with companion guidelines, Midwifery, 27, 409-416
In April 2015, the Dutch-based Committee for Innovation of Health Care Professions and Education presented to the Dutch Minister for Health, Welfare and Sports, Mrs. Edith Schippers, an advice entitled: Moving towards new health care and new health care professions: the contours. In 2012, Mrs. Schippers had asked for advice on a future-oriented classification of professions and a continuum of education in health care in the Netherlands. She did so, because of the societal and demographical changes that challenge our current health care system in terms of quality, workload and available funding. The demand for care is changing. We live longer and often have numerous chronic disorders. At the same time we want more say and we increasingly want to retain control over our own health and care. Care and treatment are shifting in the direction of encouraging, recovering or at least retaining as far as possible opportunities that permit functioning and participation. This changing demand for health care, in combination with social and technological developments, poses new demands on how professionals work. This requires different tools and different behaviour on the part of both professionals and citizens. The advice that was developed and subsequently presented to Mrs. Schippers is a landmark document, not just because of its content, but also because of the way in which it came into being. The Committee decided to invest in a development trajectory, with the expected demand for care in 2030 as point of departure and with a number of predesigned building blocks as the basis for discussions. In addition, the Committee’s approach was characterised by intensive multi-stakeholder interaction with the field and was an iterative process: step-by-step progress, using progressive insight in each new phase. Over the years, the committee held discussions with more than 1000 persons. Think-tanks, experts and focus groups were consulted. More than 100 presentations were held. Moreover, through the so-called ‘breeding places’ approach, the Committee’s work opted for a regional approach, in order to take into account the regional variations in the development of care demand. This approach consisted of three phases: in the analysis phase, during which prognoses of health care demand in 2030 were developed on the basis of demographical developments. In the ‘breeding phase’, think-tank meetings were organised with local and regional actors, such as consumers of care, care providers, health insurances, education institutions, municipal councils and provincial government. Together, and on the basis of the aforementioned prognoses, they designed their ‘care landscape 2030’. In the subsequent experimental phase, existing good practices, contributing to the envisaged care
landscape, were identified, assessed and further implemented. These experiments will continue throughout 2015. This intensive co-creation process resulted in shared ownership, and facilitates the (still on-going) monitoring and evaluation activities. The final advice to Mrs. Schippers has been framed as an advice “from, by and for the world of health care”. It can count on a broad basis of support with citizens, professionals, administrators, educators and local councils. It also forms the basis for the Dutch investments in the health and care workforce in the coming 15 or so years and has provided the Ministry of Health as well as the Ministry of Education with important leads for their policy. A brief note on the content of the report: the committee distanced itself from the former WHO definition of health (WHO, 1948) and adopted a new concept of health, as formulated by Huber et al. (BMJ 2011;343:d4163). Another point of departure was the focus on how citizens function, instead of the emphasis on how citizens are hampered in their functioning by diseases, disabilities and self-reported health complaints. The committee has not focussed on a new classification of professions, but advises a dynamic continuum of skills that focus on health care demands in the year 2030. This seems far away, but it is not. Care professionals of the year 2030 are currently attending primary school. A dynamic continuum of skills requires continual adjustment and harmonisation and more flexibility than the current system provides. A subsequent advisory report relating to the education system for the health and care workforce will be published by the end of 2016. That advice will provide direction for ‘a life-long education’ and address the question of how to shape the continuum of skills via educational paths.

References


Realization of fundamental human rights including right to health is enshrined in the constitution of Kenya 2010 with article 43 of the Kenyan constitution stating that “Every Kenyan has a right to the highest attainable standard of health including reproductive health services.” Health Financing: In April 2001, African heads of states set a target of allocating at least 15% of their annual budget to improve healthcare in the now known Abuja Declaration. On this issue, Kenya has had little appreciable progress. Over the last decade health sector financing allocations remained between 4% and 8% whereas in 2015 the allocation was at 4.9%. Expenditure in proportion to GDP increased from 5.1 to 5.4 while public expenditure as a proportion to general government expenditure reduced from 8.0 to 4.6. Per capita health expenditure increased from $34 in 2001 to $42 in 2010 below WHO target of $64. The health sector is predominantly financed by private sector resources including household and out-of-pocket. Other planned means of health financing include: (1) Greater allocation by both national and county governments to attain universal health coverage (2) Social health protection mechanisms to progressively facilitate attainment of universal health coverage (3) Developing and strengthening innovative health care financing from communities periodically reviewing criteria for resource allocation. (4) Putting in place comprehensive mechanisms for financing of emergency health services. (5) Pooling resources to increase efficiency in utilization of health resources. (6) Developing and implementing a healthcare financing policy. (7) Progressively working towards the elimination of payment at point of use for health services through social health insurance and government subsidies. (8) National and county governments putting in place resource mobilization strategies targeting all sources of funds e.g levies and taxes to progressively move towards increased per capita expenditure on health.Human Resources for Health: In general, Kenya has had an increase in health personnel over the years to peak at an average of 2.7 doctors and 159.3 nurses for 100,000 persons in 2013 against WHO’s recommendation of an average of 21.7 doctors and 228 nurses per 100,000 persons required standard for optimal delivery of services. Further to deliver on constitutional right to health more personnel are needed. Distribution of workers tend to favor regions perceived to have increased social economic development leaving marginalized and hard to reach areas at a disadvantage. Inadequate health workers, lack of essential tools, medical and non-medical supplies in health, poor and unsafe working environment contribute to poor morale and productivity. This has in turn led to a high a number of health workers a majority of who are women migrating abroad in search of “greener pastures”. An aging population in the northern countries has also resulted to ongoing massive recruitment of health workers from Kenya to the USA, UK, Canada and Australia.
This recruitment is done through referrals by fellow health workers through the internet. Social determinants of health: Kenya had literacy in women peaked to 85.6% in 2013 while progress toward nutrition stagnated in women and children. Access to safe water increased by 62% in urban areas and 55% in rural areas. However arid and semi-arid areas of Kenya have poor and in some areas no access to water. Population active in employment increased from 28.3% in 2009 to 32.4% in 2013. More needs to be done on roads and infrastructure and availability of proper housing as health promotive measures. Recommendations to the Commission: (1) Highlighting the import role unions play in ensuring citizens achieve highest attainable standards of heath through; a) negotiating good collective agreements for their members who are providers and users of public health services thus averting strikes and promoting industrial peace b) championing decent work for all health and social care workers. (2) Demanding that African governments live to their commitment of allocating the targeted 15% of their annual budget to public health. (After all they signed for it). (3) Involving unions in monitoring, evaluation and review of the government’s heath sector strategic plans. (4) Using a multi sector approach in dealing with issues of human resources for health through involving the ILO tripartite system especially on health worker migration as a lot of good practice has been spear headed by unions that can be shared to other stakeholders e.g PSI Migration project in Kenya. (5) Conducting more research and encouraging innovations to advise the government and other stakeholders on current health status and ways to improve health care delivery for citizens to achieve the highest attainable standards of health.

References

As Above - Own Data
The Medical and Health Workers' Union of Nigeria (MHWUN) very much welcomes the timely constitution of this very important High Level Commission. The central place of health for humankind’s development as a whole cannot be overemphasized. The spread of diseases such as Ebola and Zika further highlight the reality of the global nature of health challenges beyond the immediate theatre of the most impacted countries and regions. Multi-sectoral responses and institutional reforms. The health system is not an island. Towards bridging the quantitative and qualitative deficits of human resource for health and achieving the SDGs and progress towards UHC, an integrative approach anchored on institutional reforms bearing on the educational and financial systems, for strengthening health systems is of the essence. In terms of education and training, in-service education for health workers would have to be scaled up at national and sub-national levels. More importantly, pre-work competency-based curricular have to be formulated/strengthened, including for mid-level auxiliary health workers. Greater regional and international streamlining of accreditation must equally be taken up with vigour. Public funding by states is of the essence, as health is not and should not be treated as a mere commodity. Citizens and their communities have to be encouraged to play more active roles as stakeholders and contributors and not merely as clients and paying consumers. Possibilities of community-established health facilities with central-state/municipalities’ support should be explored. Such public-public partnerships (PUPs) foster solidarity as well as help pull resources together. Successful PUPs such as the Community Partnerships with Health Professional Education Initiative in South Africa assisted in expanding the number of health workers in rural areas, with the setting up of clinics. It also helped engender the empowerment of young women with its teenage pregnancy projects and mainstreamed youth in its work through youth desks. The multi-layered partnerships that constitute the global multi-sector response to the health crisis need to be more explicit on the centrality of human resource for health, for the fulfilment of their aims, in mobilising resources. Innovative sources of financing and conditions for maximizing socio-economic returns from investments in health and social sector employment. Limited funding opportunities has been a perennial problem associated with efforts to address the questions of numeric, skills mix and geographical inadequacies and low motivation of health workers. Indeed, International Finance Institutions such as the World Bank have continually put greater emphasis on the demand-side being ability or willingness to pay of public institutions, over the supply side of bridging the quantitative and qualitative gaps human resource for health gaps. It is important to stress that, such perspectives underline the commodification of health, which is part of the broader attacks that neoliberalism has brought to bear on the sense of community of humanity. It also
fails to grasp the broad spectrum of the health workforce which includes mid-level personnel and other providers in the informal and traditional spheres. Within this framework, the socioeconomic returns of a counter-approach are also lost. These include: short-term cost savings in the health system as a whole by reducing the numbers of in-patients; improved productivity as a result of a healthier population; higher aggregate demand with the employment of more (health) workers; reduction of potentialities for outbreaks of epidemics such as Ebola and Lassa fevers, and; empowerment of a larger number of women, who traditionally constitute significant proportions of the health workforce. Funding of health workers’ employment, particularly for (resource-rich) Lower and Medium Income Countries could be enhanced with the curbing of illicit financial flows and related phenomena. Upholding tax justice and establishing an equitable global trade regime are practical means of ensuring the availability of funds for addressing the health crisis, by expanding employment. Considering the fact that labour migration results both in brain drain and loss of investments made in the education and training of health workers in poorer countries, it is also apt that compensation which would be channelled towards expanding human resource for health at home, is made to sending countries. This is quite feasible by, for example, repatriating the taxes on incomes of the “imported” health workers.

References


The Medical and Health Workers' Union of Nigeria (MHWUN) very much welcomes the timely constitution of this very important High Level Commission. Global and regional imbalances and unequal distribution of health workers will reinforce existing inequalities between and within countries’ health systems. Fragile systems which need to be strengthened would be stretched to collapse, resulting in poor crisis preparedness as was the case with the recent Ebola outbreak. The consequences extend far beyond the immediate countries so disadvantaged. Labour mobility is both engendered by and fosters such imbalances. There is thus an urgent need for the international community, including Member States of the UN to address both the push and the pull factors that spur the migration of health workers. Ireland and Norway are role models in this noble sense. Drawing from their experiences, agreements should be made with sending countries on the “duration of stay, employment conditions, training options and workers’ return”, where foreign health personnel are needed. Similarly, foreign policies that encourage the strengthening of health systems with particular focus on building the human resource for health in low-income countries should be encouraged. Generating political commitment from governments and key partners, The adoption of the SDGs appears to point at some level of political commitment on the part of UN Member States. There is however the need to give full life to this, if concrete manifestations of efforts made on earlier commitments are anything to go by. It could however be hazarded that the adverse global impact of such health challenges as Ebola and Zika diseases could help in convincing Member States on the need for decisive action, at this point in time. Ensuring this however requires working as well to ensure greater cooperation and collaboration between state and non-state actors at several levels, from the immediate locations of health services delivery to the international sphere. Respect for trade union rights cannot but be a crucial element in this regards. The ban on trade unionism in the Liberian public service helped undermine the clarion call of health workers at the onset of the Ebola outbreak. Regional institutions should also encourage relations with regional health networks such as the West African Health Sector Unions’ Network, while the participation of GUFs like the PSI internationally should also be noted as a strength for global governance focused on achieving the SDGs and pursuit of UHC. A vibrant social movement’s integral presence would definitely ensure there is healthy pressure on states to live up to earlier made commitments like the Abuja Declaration of African Heads of States to set aside at least 15% of their countries’ annual budgets for healthcare delivery.

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What are the conditions needed for investment in employment in the health and social sector to achieve Universal Health Coverage and produce inclusive economic growth, particularly for women and youth? The statistics about those unable to access health services are disturbing. The WHO estimates that at least 400 million people do not have access to one or more essential health service. The ILO paints a more alarming picture, suggesting that health workforce shortages mean globally more than half of the population is excluded from access to needed healthcare, particularly women and children living in low and middle income countries. More than this, as many as 100 million people globally are pushed below the poverty line every year as a result of the costs of healthcare expenditure. Depending on the poverty measure used, between 6% and 17% of people in low- and middle-income countries are tipped into or pushed further into extreme poverty because they had to pay for health services out of their own pockets. Funding is crucial. Governments, particularly those in lower-income countries, face many demands on where to spend their money, but – as laid out in sections below – domestic decisions to increase health spending can produce wider societal benefits. The structure of health systems is also an important factor. The UK’s NHS continues to rank ahead of comparable systems in other rich nations, in terms of both efficiency and equity. The reason for this is that the NHS is a tax-funded public service and one that, despite recent attempts to import market mechanisms and boost privatisation, remains overwhelmingly publicly delivered. There should be little or no role for the profit motive in the delivery of healthcare. The people’s health is too fundamental for corporations to be able to make money from sickness. The use of private equity, financial engineering or other complex financing methods are particularly inappropriate in the health sector, as this opens up life and death services to unacceptable levels of risk – a risk that is invariably ultimately borne by the state anyway, as there will always be a need to bail out financially stricken health services.

What are innovative ways of effectively and efficiently financing health workforce investments towards achieving the Sustainable Development Goals? The importance of workforce planning in the delivery of healthcare is too often overlooked, including by the richest nations. Wherever possible, short-term fixes to address political imperatives need to be resisted in favour of prioritising longer-term health needs. This involves a proper assessment of which shortage professions exist within domestic health workforces and where shortages may open up in future years, whether as a result of a lack of supply of appropriately trained health professionals or due to changes in demography or other areas such as migration policy. The availability of the right staff and the skill mix in workplaces is also significant. A March 2016 report from the OECD points to the need for countries to reform their training and employment strategies to better respond to people’s
changing health needs. The report notes that a considerable number of doctors and nurses report a mismatch between their skills and their job requirements: for example, around half of doctors and 40% of nurses report being under-skilled for some of the tasks they have to perform. The OECD recommends countries ensure health workers acquire the right skills and are given opportunities to adapting their skills during their working life. Another area to consider is for countries to ensure they focus not just on getting the right balance of clinical staff in their workforce and in individual workplaces, but also that they get the right number and mix of healthcare support staff. It is all too easy for employers and/or governments to plan for the right number of doctors and nurses, as part of a narrow focus on the so-called “frontline” at the expense of the “back office”. Such an approach not only undervalues and undermines the work of support staff, it is also counter-productive as it can lead to nurses, for example, spending increasing amounts of time on paperwork rather than on patients where a hospital employs too few administrative staff. It is important to note that quality healthcare depends on a team ethic right across the different levels of the health workforce, whether clinical or non-clinical.

**References**


Commonwealth Fund, 2014,


What are the social and economic returns on investments into health employment and what are the opportunities to maximize these? How could these returns on investment be measured? There are major benefits to be had from investing in health employment. Healthcare is an extremely labour intensive sector; after all, these are caring professions, where people are looking after other people. So, it is important to emphasise that as part of an overall increase in health spending, investment in the health workforce is one of the fastest and most effective ways to improve health outcomes. Beyond the most basic goal of improving health and boosting life expectancy for citizens, there are wider benefits. For example, access to quality healthcare services also provides countries with a more productive workforce, while reducing absence from work and social security payments to individuals who are too sick to work. All of which can enhance economic growth. Increasing the number of health workers also provides more jobs overall, holding out the prospect of further growth. One way of maximizing returns on investment is to put the conditions in place for the healthcare workforce to be more productive. Unsafe working conditions remain common in many workplaces in the health sector and this can hinder the ability of staff to do their job to the best of their abilities. The very nature of treating the sick means that health staff are exposed to health risks that other workers are not, but such jobs can also be very physical, involving the lifting or moving of patients. And worldwide an estimated three million incidents of sharps injuries happen every year, causing more than a third of Hepatitis B and C infections among health workers. The often low salaries that health workers earn is another problem. The global economic crisis, and the use of austerity policies to deal with its effects, has made the situation considerably worse. The ILO points out that the wages of public servants, including health workers, were cut or capped in as many as 98 countries, including 75 developing countries, with overall public expenditure cut in 122 countries. Inadequate wages have knock-on effects, in terms of increased absence from work or workers seeking better wages outside the health sector or outside their home country. What are the social and economic costs of inaction in the health and social sector labour market? The costs of inaction are most clearly seen in the alarming shortfall of health workers across the world. There is a projected shortage of 18 million health workers in low- and lower-middle-income countries. The ILO estimate that there is currently a shortfall of more than 10 million health workers worldwide to ensure that all those in need receive quality health services. This is particularly a problem in low-income countries where, as a result, close to 90% of the population has no access to health care. The ILO’s World Social Protection Report estimates that countries should have on average 41.1 health workers per 10,000 people to be able to provide essential healthcare to its entire population. However, in many low-
income countries this is far from a reality, with Asia and Africa are the two
continents where most additional health workers are needed. What are the risks
and impacts of imbalances and inequitable distribution of health workers and
how can these be mitigated? Goal 10 of the 17 Sustainable Development Goals is
to “Reduce inequality within and among countries”. The recent OECD report
recommends that countries provide everyone with adequate access to healthcare
regardless of where they live, by promoting a more even geographic distribution
of health workers and services through financial incentives or regulations, and
making greater use of innovative health service delivery models, notably
telemedicine. There are further issues around how the international community
chooses to use migrant labour (which is covered in a later section).

References
[1]http://www.ilo.org/global/about-the-ilo/newsroom/comment-
analysis/WCMS_249229/lang--en/index.htm
The Royal College of General Practitioners (RCGP) is pleased to respond to the call for contributions issued by the Expert Group of the High-Level Commission on Health Employment and Economic Growth. This contribution (the first of five) only addresses some of the thirteen areas on which responses are sought. The RCGP would be very willing to submit supplementary evidence on other areas, or more detailed evidence on the areas covered below, at the request of the Expert Group or the Commission.

The evidence below draws on examples and evidence relating to the United Kingdom National Health Service (NHS). The RCGP accepts the analysis of WHO that all countries need sufficient health workers, that this will help achieve the Sustainable Development Goals, and that stimulus to health and social sector employment in all countries will itself make more good work available, with socioeconomic benefits to the economy, and to women and youth, and benefits to population health and wellbeing. In that context, it is important to note the strong evidence for the positive benefits for physical and mental health and wellbeing of good work and the damage caused by unemployment and prolonged sickness absence. That evidence applies to the whole working-age population, but also to those working within health and social care.

In the NHS, workforce planning—in terms of ensuring sufficient doctors, nurses, therapists and other healthcare professionals to meet population needs, through training within the UK—has been notoriously poor for decades. The RCGP believes that some 10,000 additional GPs are required in the UK, in order to meet the rising demand for consultations caused by factors such as the ageing population and the increasing prevalence of long-term conditions. Other medical specialties, including accident and emergency medicine and psychiatry, are also beset by staff shortages, and there are inadequate numbers of other members of the primary healthcare team, including district nurses and health visitors. John Chisholm

On behalf of RCGP

References


Submission 93
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Organization Type: Health Professions Association and Union
Country: United Kingdom of Great Britain and Northern Ireland
Contribution Type: Opinion

Question Answered: 6

How can we ensure gender sensitive policies that enable women and girls opportunities to enter the health and social sector workforce? How do we engage women to engage in decision making related to structural inequalities they face in employment? Following the points made above, the use of austerity by many countries of the world has had a particular detrimental impact on women workers, as public sector cuts tend to hit women’s pay and employment harder than men. In Greece, for example, between 2008 and 2014 the number of women employed in the key industries of public administration, education and health fell by 76,900, or 16.1%, compared to a 15.5.% fall for men. Jobs in public administration in the same period were hit particularly hard, with female employment falling by twice as much (-31%) as male employment. In the UK example, some positive measures to tackle structural inequality were facilitated by a Gender Equality Duty, introduced by legislation in 2007 (although unfortunately subsequently weakened). This included the ability to consult on and negotiate family-friendly and flexible working policies which enabled more women to remain in the workforce at a level suited to their skills; taking proper account of the needs of women when organising training and developmental opportunities; and women-focused recruitment and mentoring. The importance of improving the workplace for women is well-recognised, and the business case is strong, in the health sector as elsewhere. Organisations are able to capitalise on the knowledge and skills of all their staff, rather than half the talent available, and women bring with them innovation, creativity and new ways of working, to the benefit of all involved – this applies as much to healthcare as other sectors. There is much which needs to be done to persuade employers of the business case for women-friendly workplaces which take account of the fact that women are still the primary carers in most families, in virtually all parts of the world. Where legislation is introduced, the enforcement measures must be significant. In the UK, the Equality and Human Rights Commission (EHRC) is the enforcement body for the Equality Duty, with responsibility for supporting both employers and employees in understanding often complex equality legislation. However, underfunding of the EHRC has created significant barriers to progress. To ensure that employers are taking appropriate measures, equal pay audits are essential. These enable employers, their workers and trade unions to identify and deal with the structural inequalities which cause the gender pay gap, and hinder women’s progress in the workplace. Part-time work is often the only option for women seeking to balance homecare commitments with an income, but they pay the price with women’s progression often hampered by the inflexibility of employers to consider non-traditional working patterns. As a result, frequently women end up working far below their skill level as there are few opportunities to progress on a part-time basis.

Measures which make a difference include challenging the long-
hours culture in the workplace which prohibits carers from progressing; providing genuinely family friendly flexible working hours which do not have a pay penalty attached; considering other forms of flexible working, such as compressed hours or shorter hours during school holidays; support with good quality childcare and other dependent care. Employers should also be encouraged to give greater consideration to the suitability of all posts for part time or shared work. There are few jobs which cannot be made flexible given employer will and creativity, and the business case for flexibility through which employers retain experienced and skilled women in the workplace is sound.

References

What are innovative ways of optimizing benefits and reducing harms arising from international mobility of health workers? Receiving countries may benefit by filling gaps in shortage occupations or bringing in skills they are lacking. However, they may suffer in the longer term if the use of migrant labour leads to a tendency to train too few home-grown health workers. The OECD has emphasised the importance of this last point, saying that richer countries should reduce their reliance on foreign-trained health workers, and should instead train a sufficient number and proper mix of health workers to meet future needs, without unduly relying on the training efforts of other countries, particularly those suffering from acute shortages, as is the case in a number of poorer economies. One of the key things is to ensure that migrant workers have proper access to joining trade unions. Trade union organisation not only protects migrant staff (and the wider workforce) from exploitation in terms of wages, terms and conditions, but it is also a peer-led way of inducting migrant workers into the professional culture specific to the new country they are working in. How can education and training models be transformed to build a fit for purpose health workforce? In terms of education and training, issues around workforce planning and skill mix have been addressed already. A further item worthy of consideration is to ensure that education and training models are geared towards producing sufficient numbers of staff to meet internationally recognised targets for staff-patient ratios in healthcare. For example, the ILO reports worrying cases of nurses working in emergency care units who have to take care of four or more patients when one or two is the preferred maximum. Safe minimum staffing levels can reduce the potential for harm to patients and increase certainty and security for healthcare staff. As an eventual goal, minimum staff-to-patient ratios in all healthcare settings would provide peace of mind to families and staff. There is growing international evidence of the positive impact this can have, particularly in terms of lower patient mortality. The US Agency for Healthcare Research and Quality found that hospitals with low nurse staffing levels tend to have higher rates of poor patient outcomes such as pneumonia, shock, cardiac arrest, and urinary tract infections. Meanwhile research in the UK has found that eight is the absolute maximum number of patients any nurse should look after at one time; any more than this and a hospital can expect to see more deaths per year than a better staffed institution. Nursing organisations throughout the world are concerned about the effect of low staffing levels on care. The Canadian Nurses Association issued an explicit statement of its belief that nurses make a difference, and in California pressure led to legislative change, requiring hospitals to respect set ratios. Statutory ratios were introduced in the Australian state of Victoria, where 96% of nurses regard ratios as vital, leading to pressure in other parts of the country. What types of multi-sectoral responses have worked and
why? What multi-sectoral actions can be taken to enhance commitment for coherent workforce planning, development, employment, protection and security? One of the purposes in moving from the Millennium Development Goals to the Sustainable Development Goals, was to move away from a focus on specific diseases and health issues and towards a broader system-wide approach. Part of this should involve a proper acknowledgement of how population health is affected by a number of factors other than just the quality and accessibility of healthcare services themselves. This means it is important to look at the interaction between healthcare and a number of other sectors. Some of these other sectors are more obvious than others, such as social care, which operates separately from healthcare in many parts of the world. Other sectors such as housing, employment and education can also have a profound impact on health and there is a need for all of these areas to be included more fully when assessing the potential for improving health outcomes. As laid out above, issues around equality are also relevant, and in the bigger picture goals to eradicate poverty and to provide food security are clearly of vital importance.

References
What institutional reforms are needed to strengthen governance for the health and social sector labour market? PSI has emphasised the importance of ensuring that health workers around the world are not expected to work on a voluntary basis. Currently many countries do not have systematic policies to deal with this. Health information systems need to be improved to allow countries to collect data on those health workers that are seen as informal providers, as a means of ensuring those workers become a formal part of the health system. India has developed advanced strategies for health workers and used this to improve health in some of its most impoverished regions. How can political commitment from governments and key partners be generated to support implementation of the Commission’s recommendations? Depending on what the recommendations are of course, there is a need to emphasise the urgency of the need to reduce the shortfall in workforce capacity. The link between adequate staffing levels and health outcomes should be repeatedly highlighted to show governments the importance of investing in the health workforce. And the relationship between improved health outcomes and economic growth should also be centre stage as a part of this. In order to garner political buy-in from around the world, it is important that governments grasp both the benefits of investing in the health workforce as an end in itself, but also the additional benefits this can generate for them. What elements should be considered in a monitoring and accountability framework for the implementation of the Commission’s recommendations? Monitoring is particularly important as a means of addressing health inequalities, as it provides a means of shining a light on inequality, highlighting areas for improvement and tracking progress in reducing inequality over time. A 2015 WHO report on inequalities in reproductive, maternal, newborn and child health stated that “Equity-oriented health information systems are the foundation for monitoring health inequality.” The report suggests that building capacity for health inequality monitoring requires developing, strengthening and expanding equity-oriented health information systems at the national level. What are the potential impacts and implications of advancements in technology in health on the health workforce by 2030? How could these be anticipated and leveraged to maximize returns on health and social workforce investments in the 4th industrial revolution? Technological advance has a number of implications for the health sector in general and the health workforce in particular. Advances in technology provide the potential to improve the health and longevity of citizens, as well as contributing to making workplaces safer and work less physically demanding for workers. In some instances, there may be drawbacks for the workforce as well, however, particularly if new technology is used as a means of employing less staff or to take away some aspects of a worker’s role. One way that technology could be harnessed to benefit the workforce is by expanding the voice of health staff in
the workplace. PSI has pointed out that although health workers are the central pillar of any health system, we rarely hear directly from them. So mobile technology, and the crowd-sourcing and peer networking it makes possible, could be one way of giving greater voice to the health workforce.

References

WORLD HEALTH ORGANIZATIONHIGH-LEVEL COMMISSION ON HEALTH EMPLOYMENT AND ECONOMIC GROWTHROYAL COLLEGE OF GENERAL PRACTITIONERS CONTRIBUTION THE NHS WORKFORCE: The Royal College of General Practitioners (RCGP) is pleased to respond to the call for contributions issued by the Expert Group of the High-Level Commission on Health Employment and Economic Growth. This contribution (the second of five) only addresses some of the thirteen areas on which responses are sought. The RCGP would be very willing to submit supplementary evidence on other areas, or more detailed evidence on the areas covered below, at the request of the Expert Group or the Commission. The evidence below draws on examples and evidence relating to the United Kingdom National Health Service (NHS) and continues the consideration of the NHS workforce begun in the first contribution. The RCGP is an independent professional body and is the largest membership organisation in the United Kingdom solely for general practitioners (GPs). It is a network of more than 50,000 family doctors working to improve care for patients. It works to encourage and maintain the highest standards of general medical practice and acts as the voice of GPs on education, training, research and clinical standards.

Recent examples of the failure of the UK to become self-sufficient in its healthcare professional workforce include continuing overseas recruitment of nurses, cuts in training places for nurses and plans for the recruitment of Indian GPs to work in England. This reliance on immigration from outside the European Union also inevitably has detrimental consequences on healthcare in the countries of origin of those migrant doctors and other healthcare professionals, particularly when those countries are developing countries. Their countries have invested in their training, but they then move to the UK and reduce the available healthcare workforce in their own countries. There have been other recent threats to the adequacy of the healthcare workforce in the UK. The Government is proposing removing bursaries from healthcare students, thus ending free university education for nurses and introducing loans, and the Shape of Training review has proposed moving the point of full registration of a doctor to the point of graduation, which would threaten the accelerated training currently provided in graduate-entry medical schools in the UK, on courses that widen the diversity of the medical workforce. Indeed, concerns have been raised more generally about the lack of diversity amongst doctors, with 80 per cent of medical students in the UK coming from 20 per cent of its schools, a lack of people from lower socioeconomic backgrounds entering the profession, and disquiet that some people, despite having the necessary aptitude, are being excluded from a medical career.

On behalf of RCGP

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one-in-four-nurses-from-abroad [accessed 09.04.16]
WORLD HEALTH ORGANIZATION HIGH-LEVEL COMMISSION ON HEALTH EMPLOYMENT AND ECONOMIC GROWTH
ROYAL COLLEGE OF GENERAL PRACTITIONERS CONTRIBUTION THE NHS WORKFORCE:
The Royal College of General Practitioners (RCGP) is pleased to respond to the call for contributions issued by the Expert Group of the High-Level Commission on Health Employment and Economic Growth. This contribution (the third of five) only addresses some of the thirteen areas on which responses are sought. The RCGP would be very willing to submit supplementary evidence on other areas, or more detailed evidence on the areas covered below, at the request of the Expert Group or the Commission. The evidence below draws on examples and evidence relating to the United Kingdom National Health Service (NHS). The RCGP is an independent professional body and is the largest membership organisation in the United Kingdom solely for general practitioners (GPs). It is a network of more than 50,000 family doctors working to improve care for patients. It works to encourage and maintain the highest standards of general medical practice and acts as the voice of GPs on education, training, research and clinical standards. It is no surprise, against the background of increasing workload and an overstretched workforce given in previous RCGP contributions, that morale amongst many healthcare professionals is poor. There are many examples of why this should be so. Currently, the Government is intending to impose a new contract on junior doctors, which is widely perceived as being unsafe for patients and unfair to doctors. It should be noted that the Government’s own equality impact assessment acknowledges that the new contract will disproportionately impact on doctors who work on a part-time basis, women, lone parents and disabled doctors. Indeed, that aspect of the contract has been specifically criticised by Dr. Jim Campbell, Director of the WHO’s Health Workforce Department. Additionally, there is insufficient support available throughout the UK for healthcare professionals in difficulties, although there are some examples of good practice which provide necessary support in some parts of the country, for example the NHS Practitioner Health Programme, which is a service for doctors and dentists with issues relating to a mental or physical health concern or addiction problem, serving those in London and some nearby areas. There is also a continuing lack of support for those whistle-blowers who raise concerns in situations where patient safety and patient care are threatened. Many still find themselves victimised and bullied and find their future employment prospects threatened, despite their professional obligation to speak out in the public interest. It is important that the NHS moves to a no-blame culture in which professionals can raise concerns and admit to mistakes without the threat of reprisal, and in which the Service learns from experience and rectifies problems. Early attempts to establish such a culture did not achieve the changes needed, although further attempts are now being
made. John Chisholm On behalf of RCGP

References


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References


Sustainable Development and International Mobility of Healthcare Professionals with Special reference to India

Strengthening health system with healthcare professionals (HCPs) is pivotal for realising the sustainable development goal of ensuring healthy lives and promote well-being for all at all ages by supporting Universal Health Coverage (UNDP, 2015). In 2006, 57 countries had less than the critical level of 2.3 physicians, nurses and midwives per 1000 population with highest deficiency in relative terms in Sub-Saharan Africa and in absolute terms in South East Asia (WHO, 2006) and the same situation is continuing till now in low and middle income countries (LMICs) (OECD, 2016). Global demand for HCPs is ever increasing due to growing ageing population with associated complications; increasing burden of chronic non-communicable diseases (Schultz & Rijks, 2014); existing and emerging infectious diseases (WHO, 2006); increasing population; and need to provide better health services for sustainable development. However, there is a shortage of HCPs due to lack of replenishing capacity of ageing HCPs with the new domestic workforce, especially in advanced countries (Schultz & Rijks, 2014) and migration of HCPs in search of better opportunities. These result in uneven and inequitable availability of HCPs within the country and between countries (Schultz & Rijks, 2014). Most of the advanced countries are able to fill this gap with migrant HCPs from LMICs (OECD 2007, 2016; Dumont, et.al. 2008; European Commission 2011; Schultz & Rijks 2014). Very low density of HCPs (OECD, 2016) and deficiency of high quality HCPs due to large migration of highly meritorious and elite educated HCPs (Kaushik, et al. 2008) destabilise the progress of health sector in LMICs exporting HCPs (WHO, 2006; OECD, 2016). Globally, India is the major exporter of HCPs (OECD 2007, 2016; Kaushik, et al. 2008). The developing countries like India are facing a "Triple burden of diseases" due to communicable diseases, increasing burden of non-communicable diseases and emerging infectious diseases (Government of India, 2015). In India, despite continuous increase in the number of medical colleges and enrolment from 1991-92 to 201-14 (Table 1), the ratio of physicians per 1000 has increased only marginally from 0.5 to 0.7, due to increasing population and out-migration of HCPs (World Bank, 2015). Even this ratio, is unequally distributed due to various socio-economic factors leading to persisting inequality in health status between and within states of the country (Govt. of India, 2015). Table 1: Changes in Number of Medical Colleges and Medical Enrolment in India

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Medical Colleges</th>
<th>Enrolment Population in Millions</th>
</tr>
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<tr>
<td>1991-92</td>
<td>146</td>
<td>12199</td>
</tr>
<tr>
<td>2011-12</td>
<td>846.42</td>
<td>2011-12</td>
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Annual Growth Rate between 1991-92 to 2013-14 7.32 13.55 2.15 (1991-2011) Source: National Health Profile 2015, Govt. of India. Way forward Based on the review, a combination of the following measures can be implemented to strengthen health workforce: (1) Support system to retain doctors by providing scope for better professional exposures and development along with economic incentives and employment provision to spouses in the same area. (2) Increasing retirement age for HCPs in the public sector. (3) Signing of bonds by HCP students at the time of admission for providing minimum years of service after education within the country. (4) Recovery of fees of subsidised education and training with interest from the migrating HCPs. (5) Increasing expenditure on educating HCPs which will also help in achieving Universal Health Coverage. (6) Creation of Health Fund earmarking the revenues collected from exit tax / fees imposed on migrating HCPs, taxes imposed on liquor, tobacco products, medicines and medical products, as building a sustainable health workforce needs sustainable financial commitments. (7) Increased use of tele-health facility in advanced regions and improving the accessibility of internet technology in remote areas and equipping the HCPs and the public with appropriate training and education in developing regions. (8) Encouragement to medical tourism in developing countries. (9) Encouraging non-material remittances by migrant HCPs in the form of voluntary services in their speciality and transfer of knowledge, skill and experience by returning to home country at least for short duration. India, being one of the major knowledge economy with large demographic dividend that is projected to continue even in the future (United Nations, 2015) can continue to play a pivotal role in strengthening global health system along with its own. In the era of globalisation, it needs to use a balanced approach for sustainable global wellbeing with the able support of international bodies and organisations.

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The set of economic objectives to be pursued at the current stage in Russia is extremely pressing, since it is dictated by the existing low financial provision for the healthcare system within the framework of budget and insurance medical care, which is, in turn, responsible for the low salaries of health workers, and the search for the required finances within the scope of restructuring the network of institutions, as well as the staff and personnel component of providing for healthcare. Ultimately, all this tells on the quality and scope of public healthcare and is directly linked with resolving the problems of engaging and retaining personnel and raising their socio-economic security. For many years, the Trade Union has been insisting on the state raising its healthcare spending as a percentage of the GDP, this year’s figure being about 3.4%, whereas, according to the WHO expert opinion, a viable healthcare system requires public spending of at least 5–6% of the GDP. The economic basis of the mandatory medical insurance system is also in need of improvement, since there is currently no economic justification for the need for finances for healthcare based on a system of standards and procedures for providing healthcare. Basic insurance system principles have to be developed on the basis of actuarial tables, regulation of cash flows among insurance participants, mechanisms for a personified approach to provision of healthcare and improvement of organisation of and control over the activities of medical institutions. The most important of the State Healthcare Policy social objectives is to resolve the shortage of specialist personnel. In total, Russia has about 500 thousand doctors and about 1.2 million middle-level medical workers, the shortage of doctors alone being in the order of 40 thousand. In this connection, there is an acute need to engage young people and secure specialists at the local level, this necessitating greater prestige and social status of the health worker profession. The main conditions for attaining the given set of objectives in the Russian Federation consist in a fundamental change of approach to salaries; formation of an effective system of state salary guarantees; regulation of labour standards to reduce workers’ excessive workload and intensification of labour; consideration of the specifics of the activities, conditions and complexity of the work when setting pensions, and other social guarantees. The current healthcare worker salary situation in Russia is cause for serious concern. In May 2012, one of the Russian President’s first decrees envisaged a programme for raising medical worker salaries for the period up to 2018. During the three years from 2014 through 2016, the rise in the prices of goods and services means that no payroll indexation is provided for. This, against the background of the inflation figures for 2015 and predicted for 2016, means a cut in real wages and purchasing power. At least 80% of medical personnel work under harmful or hazardous working conditions. Serious problems are being identified with respect to the objectivity and quality of workplace assessment for harmful or hazardous factors, which
ultimately affects provision of guarantees and compensation. All this necessitates amended legislative approaches to assessing the factors affecting the professional activities of healthcare workers. The main risks of imbalance and unevenness in the distribution of healthcare workers resulting from decentralised healthcare governance consist in the impossibility of fully providing staff with equal socio-economic guarantees. The financial inequality between institutions is reflected in the salaries of doctors and nurses, with the result that specialists in the same field and position offering the same services, of an equal standard, under identical conditions, receive different salaries. The uneven distribution of healthcare workers across the country’s regions is responsible for uneven provision of the public with doctors and middle-level medical personnel, this in fact constituting an objective indicator of the possibility of providing full public healthcare. The ratio of doctors to middle-level medical personnel also differs substantially from one region to another, which requires a direct focus on improving healthcare worker labour organisation, in particular redistribution of the functions of doctors, middle and junior medical staff during healthcare provision. These are the factors, connected with absence of any centralised human resource management, that create the problem of internal labour migration between constituent entities of the Russian Federation, this impacting adversely on areas that are short of financial and economic resources. This problem concerns, above all, rural areas (remote territories) and the Far North.

References
Own data
As the 21st century is truly underway, it is surprising and heartbreaking to read statistics about NCD, statistics compiled by the World Health Organization. They state that 80% of malignant neoplasms, a large percentage of chronic renal disease, a major share of diabetes mellitus, occur in low and middle income countries (LMG). In some of the developing countries, there is virtually no infrastructure for the diagnosis and management of many of these diseases, especially cancer. In some of these low and middle income countries, the larger cities have the infrastructure and good facilities for the well-to-do and the rest have to make do with second rate and even third rate facilities. While in developed countries, the diagnosis of cancer demands well equipped and resourced laboratories with easily accessible special studies such as immune histochemistry and molecular diagnostics for the careful and complete diagnosis of neoplasms and their differentiation into the different subtypes. This degree of detail allows for appropriate therapy, and in the foreseeable future make it possible to give increasingly personalized therapy and thus avoid some of the many side effects of cancer therapy and the ravages of these diseases reduced and perhaps in time eliminated. Each of these diseases can and does occur at every age so that the social cost of these diseases is huge and the economic cost, to the individual, the immediate family and the nation as a whole, is very significant. Imagine a family losing a primary breadwinner in the prime of his life, because his NCD was not diagnosed in time? Or middle aged professional at a stage in life when his skills and experience are most in demand. The loss of these years of productive life can be staggering! Cardiac disease: In developed countries, the incidence of cardiovascular disease appears largely to have plateaued, thanks largely to excellent diagnostic facilities and excellent management technologies, available as well as the increased emphasis on a healthy lifestyle. These range from laboratories for the examination and detailed study of the patient’s cardiovascular system to excellent devices to be implanted by surgeons during open heart surgery or interventionalists who now eliminate the need for expensive open heart surgical facilities. In developing countries, on the other hand, the impact of other cardiovascular disease is just beginning to be felt. Given that in many of these countries the population is increasingly moving towards a sedentary lifestyle where the use of one’s limbs for locomotion is less and less and the use of power driven vehicles is significantly increasing. The impact of this health revolution is going to be very significant unless the revolution is turned around by an equal revolution in the management of these conditions and indeed in the prevention of occurrence of these conditions. Here, with the beginning of the health revolution of NCD, a strong emphasis on preventative medicine, on healthy lifestyles will bear the greatest fruit! A basic underlying factor in all of these diseases is economics and related to this are the
quality of food, the nutrition of the individuals, the accommodation they live in, the air they breathe and indeed the environment or milieu they live in. If these can be improved, the occurrence of this health care tsunami, (disaster) may be averted. Resources needed and benefits: The effort involved in this will be very significant and the resources needed for this would likely be massive. However, the improvement in life expectancy, individual health, collective health and therefore the economy of the family, the region and the nation will improve dramatically, avoiding the wastage of huge numbers of person hours that occurs at this time, and is likely to continue if this revolution is not stopped. The benefits on many fronts, especially as they affect the life and education of the next generations’ health can only be imagined. I believe that this benefit can be of staggering proportions. Inaction on this front and the consequent impact on the availability of trained health care workers will lead to significant human resource shortages and a worsening of the quality of health care provided.

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[2] www.cwp-csp.ca › Poverty”The cost of poverty – in health care, criminal justice, social services, lost productivity, lost opportunity – is a cost we cannot afford any longer.” Tony Martin

[3] www.phcanada.ca › Advocacy › Facts and StatsIn 2003, CHD cost the U.K. health care system around £3,500 million [approx. ... the social costs of inactivity would more than double the direct health care costs.


[5] Health care costs are increasing at an annual rate of 7% a year, which if ... The economic and social incentives to develop and diffuse it are powerful, and the ... www.mentalhealthcommission.ca/.../Investing_in_Mental_Health_FIN...The total cost from mental health problems and illnesses to the Canadian economy ... Health care, social services and income support costs make up the biggest ...

Submission from International Agency for the Prevention of Blindness, International Council of Ophthalmology, World Council of Optometry
Social and economic returns and benefits of investments in eye health employment: Huge social and economic returns can be made from investing in eye health employment. As recognised by the WHO Global Action Plan: Towards Universal Eye Health, tackling the shortfalls across the spectrum of eye health personnel, the maldistribution, and inefficiencies are critical to make inroads on reducing the high global prevalence of vision impairment and blindness, 80% of which is avoidable. An impressive body of evidence demonstrates the highly cost-effective nature of eye health interventions and the social and economic benefits for individuals and society of treating sight loss and providing appropriate care and support for people with irreversible vision impairment or blindness. Some data is summarised here. Estimates vary but 0.5% of GDP may be lost due to visual impairment (1). A conservative average estimate of the benefit to cost ratio to eliminate avoidable blindness and build gold standard eye health systems in developing countries is 4:1 (2). Globally around 703 million people need eye exams and glasses, and approximately 202 billion US$ is lost to uncorrected distance related refractive error worldwide (3). According to Fricke et al, an investment of 20 to 28 billion* US$ is required to train the needed 65,000 eye health personnel and set up and run facilities to tackle worldwide uncorrected refractive error, saving governments billions to their economies. ? Refractive Error: In Mozambique, the benefit to cost ratio of correcting refractive error is 14:1, using the revised Disability Weighting (4). Onchocerciasis: The African Programme for Onchocerciasis Control is estimated to have resulted in an economic rate of return of 20% through greater labour productivity and fertile land reclamation for agriculture (5). When considering cost per Disability Adjusted Living Year (DALY) averted or Quality Adjusted Living Year (QALY) gained the impact is striking. Baltussen and Smiths conducted Cost Effectiveness Analysis (CEA) of several strategies to combat vision loss (6). Their findings included: the average cost per DALY averted for cataract surgery was $Int116 for Africa and $Int97 for SE Asia; for Trichiasis surgery the cost per DALY averted was between $Int71-189 for Africa and $Int285 - 849 for SE Asia; regarding annual screening of school children and correction of refractive error the cost per DALY averted was between $Int190 - 521 for Africa and $Int112 - 444 for SE Asia. Lansingh et al. conducted a CEA of cataract surgery in nine countries (7). The findings showed that cataract surgery was “very cost effective” in all locations. Across five sub-Saharan Africa countries the cost per QALY gained was US$25-55. For Nepal and India the cost per QALY gained was US$4-36. A recent systematic review of the cost effectiveness of a range of surgical interventions conducted by Chao et al.
confirmed that the median cost of $136 per DALY averted (2012 prices) for a basket of ophthalmic interventions was “very cost effective” and recommended the inclusion of cataract surgery within a small group of “top priority disorders” requiring surgical scale up (8). Increasingly research has been collected quantifying the impact on health related quality of life (HRQoL) and also economic participation of people who have been treated with eye health interventions. ? The Cataract Impact Study was conducted in Kenya, the Philippines and Bangladesh with one year follow up for the three countries and six years for Philippines and Bangladesh (9). Prior to surgery the group with cataract had significantly lower quality of Life (QoL), engagement in productive activities, and income compared with control groups. The researchers found significant improvements in HQRoL at the one year and six year follow up. There were also significant gains in per capita expenditure at one and six years. At one year there were increases in participation, in time spent in productive activities and reduction in assistance with activities closing the gaps with controls. The exception was at the six year follow up, time spent on productive activities decreased among both cases and controls, likely due to half of the participants in the study being above 70 years. Patient QoL surveys have also been used to determine outcomes resulting from low vision rehabilitation programmes. Research conducted on a multi-disciplinary low vision rehabilitation service in Australia found significant improvements in the overall QoL measure and in accessing information, with the highest impact on emotional well-being amongst the beneficiaries (x).*Billion$ = thousand million$

References
The Royal College of General Practitioners (RCGP) is pleased to respond to the call for contributions issued by the Expert Group of the High-Level Commission on Health Employment and Economic Growth. This contribution (the fifth of five) only addresses some of the thirteen areas on which responses are sought. The RCGP would be very willing to submit supplementary evidence on other areas, or more detailed evidence on the areas covered below, at the request of the Expert Group or the Commission. The evidence below addresses the RCGP’s role internationally in building capacity in other healthcare systems. The RCGP is an independent professional body and is the largest membership organisation in the United Kingdom solely for general practitioners (GPs). It is a network of more than 50,000 family doctors working to improve care for patients. It works to encourage and maintain the highest standards of general medical practice and acts as the voice of GPs on education, training, research and clinical standards. The College accepts the analysis of WHO that all countries need sufficient health workers, that this will help achieve the Sustainable Development Goals, and that stimulus to health and social sector employment in all countries will itself make more good work available, with socioeconomic benefits to the economy, and to women and youth, and benefits to population health and wellbeing. Our previous four contributions in response to the Expert Group’s call for contributions have focused on experience with the UK National Health Service. However, the RCGP is committed to international capacity-building and system strengthening, particularly in low income and low middle income countries, has been delivering international consultancy and projects for academic and Government institutions and organisations for over 25 years, and works collaboratively with the UK Department for International Development. The College’s work includes the assessment of existing primary care and family medicine training and examination frameworks in medical schools and universities and curriculum enhancement. The global goal of universal health coverage is crucial for reducing health inequalities, and primary care and family medicine are the most effective, efficient and economical means of successfully strengthening health systems and delivering universal health coverage. Primary care is community-based, coordinated, continuous, person-centred care providing health promotion, prevention, cure, rehabilitation and palliative care to people of all ages. Internationally, there needs to be a greater focus by Governments on the recruitment, training and retention of multi-professional primary care teams and the creation of a family medicine programme. John Chisholm On behalf of RCGP
References


The contribution of health care employment to economic growth: A proposed research agenda

Jonathan Cylus, Martin McKee, Peter Smith and Josep Figueras

The European Observatory on Health Systems and Policies is currently developing a Health and Wealth policy brief series to provide insights into the linkages between health systems, health and the economy (1). The series follows a conceptual framework that links health systems to health, wealth and societal well-being, capturing causal, direct and indirect relationships between the key elements. As part of the policy brief series, we are currently investigating the ways in which health systems – in particular, health care employment – contributes to the economy. The health sector is one of the largest industries in European countries, accounting for approximately 2 to 13% of total economic output in 2013. Yet despite its size, there is limited understanding of the role the health sector plays in promoting economic growth. Distinct from its effects on population health and human capital, the health sector in its own right could be expected to affect economic growth through a variety of pathways. For example, as a major employer, the health sector provides a source of steady employment for a sizeable segment of the population. However, as a service industry that is often regarded as having limited opportunity for productivity gains (2), health sector expansions may alternatively slow overall economic growth. To answer the question “how does investment in the health sector promote economic growth” the upcoming brief reviews the determinants of economic growth within a growth accounting framework. Within this structure, various elements of the health sector could be expected to contribute both positively and negatively to economic growth. For example, positive economic growth may be attributable to factors including but not limited to greater investment in R&D, use of productivity-enhancing technologies, greater health care exports (including medicines and equipment but also health care services), and greater health sector employment. However, slower economic growth may occur as a result of disproportionate investment in labour-intensive, low productivity areas of the health system; increases in health care spending that are financed through labour market activities (e.g. higher payroll contributions) may also reduce overall competitiveness by increasing labour costs. At the same time, it is likely that
conditions related to economic policy, trade policy, demographics, resource allocation within the health sector, and the level of resources already dedicated to health play important roles in determining whether health sector investment and health care employment have favourable effects on economic growth. To ensure that health employment plays a positive role in economic growth it is important to routinely monitor the contribution of the health sector to the economy. To do so this, an assessment framework is needed which may encapsulate key indicators, including: (1) Share of population employed by the health sector. (2) Comparison of health sector wages to other professional and technical employment. (3) Impact of health care financing on labour market competitiveness. (4) Comparison of productivity in various areas of the health sector compared to other industries. Governments are under significant fiscal pressures and forced to make difficult decisions about how best to allocate public resources. In this context, the health sector is considered by some policymakers to be an unproductive drain on public resources, rather than an essential investment in a nation’s citizenry. This perception can lead to misguided efforts at cost-containment that are driven by a desire to reduce government spending on health rather than to successfully improve health system efficiency. Policymakers who recognize the importance of supporting the health sector increasingly require empirical evidence to justify prioritizing health, as well as to inform them of how to allocate resources within the health system. It is therefore of great importance to examine the multifaceted ways in which the health sector leads not only to better health and well-being overall, but in particular, how investing in the health sector can promote economic growth. This policy brief series seeks to inform the debate.

References


Proposal for Policy Brief: The economics of health worker mobility in the EU

Rationale and background: Freedom of movement is a driver of economic growth in Europe. Services, products, people and capital can circulate freely in the EU single market allocating goods and services between Member States according to supply, demand, and price levels. Thanks to EU legislation on mutual recognition of professional diplomas, EU health workers too have the right to move between Member States. Given the weight of the health workforce in terms of employment, the scope for European mobility, and the pivotal role of health workers in keeping citizens healthy and active (Campbell et al 2013), growing EU health workforce mobility is a matter of policy concern. The health sector–economy nexus, and the interdependence between health system performance and health workforce (HWF), receive increasing attention. Analysis demonstrates how health systems and free movement each can contribute to economic growth (Figueras and McKee 2012; Dumont and Liebig 2014) and what role workforce mobility plays for health systems (Wismar et al 2011, Buchan et al 2014). In a recent study, free health workforce mobility in Europe is shown to bring some efficiency gains but to cause inequity at country and EU levels as in- and outflows (re)distribute HWF and resources between EU Member States (Glinos et al 2015), raising new questions about wider economic and societal impacts. The proposed brief builds on this evidence and takes the debate forward by exploring the economic dimensions of mobility.

Objectives and outline: The mobility of tens of thousands of European doctors, nurses, dentists etc. redistributes health workers and resources from sources to destinations. The brief will explore the implications of these ‘transfers’ and ‘subsidies’ often going from resource-poor to resource-rich health systems, the costs and public health risks of vulnerable health systems, and what the scope for increased collaboration between EU Member States is to compensate for resource transfers. As part of the European Observatory on Health Systems and Policies ‘Health and Wealth’ policy brief series dedicated to the linkages between health systems, health and the economy, the brief intends to examine the economic impact of free health professional mobility in the EU. Mobility affects health worker distribution, employment, labour markets, costs of educating the workforce, health care spending, resource availability, remittances
etc, and yet evidence on socioeconomic impacts is lacking. To analyse the impacts of inequitable distribution of health workers at the European level as well as mobility’s beneficial economic implications (topic 5), and to propose tools to mitigate harmful effects and optimise the benefits (topics 5 and 7), the brief focuses on the impact of mobility in three economic areas:

I) Health system expenditure: Health care expenditure amounts to one tenth of GDP in many Member States, and HWF spending makes up the largest part of health care budgets. The brief will explore how mobility impacts on health care spending and system capacity; the costs of limited mobility data and therefore health workforce numbers for planning of services, of young generations and team leaders, educators, reformers leaving, of communication barriers and skills waste; and the opportunities for knowledge transfer via return mobility and collaboration with medical diaspora (partially reversing brain drain).

II) Employment: The health and social care sector represents around 10% of the European labour market. Mobility influences labour market participation, employment patterns and workforce numbers. The brief will explore the costs/savings of (not) employing health workers, mobility as unemployment valve, its effect on salaries, and considerations of optimal workforce allocation across economic sectors and professional groups.

III) Health workforce training: European countries spend considerable public funding on HWF education while health workers are expected to ‘give back’ to society by providing services. Mobility interrupts this link. The brief will explore the costs of training, and for destination countries the savings of receiving foreign-trained inflows and the costs of induction and integration.

References


Alignment of health workforce governance and education at the international and national level. People are the “engine” of every system, including the health care system. In this regard we all – institutions, governments, health professionals, stakeholders, academia have a great mission – to educate, to prepare, to manage and to care about the health professionals. One of the possible and effective ways to fulfill this mission is to align the health workforce governance and education at international and national level. Furthermore we have to align workforce development with service planning and funding because much of the work of health professionals in the future will not be about direct contact with patients, but about coordinating treatment and disease management. Therefore both the education and health service systems should be ready to accommodate new roles and new kinds of health workers in order to remain effective. This discussion was opened and continued during the international meeting on Transforming Health Workforce Education and Training in Support of Strategy “Health 2020” held in Varna on 9-10 November 2015. It was organized together with the team for Human resources in the WHO Regional office for Europe and the South-Eastern European Health Network. The meeting in Varna was a great success with and will have multiple effects and follow-ups to implement some of the useful suggestions and constructive solutions in the region of South Eastern Europe. It will also enhance the further partnership with the Joint Action for Health Workforce Planning and Forecasting (JA for HWF) of the European Commission to jointly achieve sustainable results. One of the main questions was how can education and training models be transformed to overcome the imbalance in the distribution of health workers in Europe and to prepare the next generations of health professionals. There is a tension in most health systems between specialists and generalists, which presents a risk that we end up with systems that are weak on the primary care end, particularly if education systems help perpetuate this trend. Any changes to the curriculum must be accompanied by good communication on why the change is necessary. If the ministry of health is conducting health workforce planning, but does not have the budget for it, it would remain largely an abstract exercise. If health and education leaders miss any of the pillars of aligning education with funding, they would not be able to achieve the goals. In relation to future areas for action, the participants highlighted that since achieving health workforce sustainability depends on bringing together different strands and policy areas, health researchers and educators ought to support governments in assessing population health needs and turning that into insight on what skills and competencies health workers need. Improving communication with stakeholders beyond the health service and education sectors is also key to building and sustaining momentum for change. In
view of global priorities for ensuring health workforce sustainability, and complementing the regional perspective of WHO/Europe on future actions needed, a national perspective was given by presenting challenges and progress to date in Bulgaria, Moldova, Albania, Slovenia.  

1) There is a growing need for change in the field of health workforce planning, with implications for different levels (national, international, and regional); change can only be achieved through joint efforts and collaboration at political and technical level;  

2) The existing data and information are not effective in the context of global mobility, thus they need to be improved and expanded;  

3) We need education and training in order to build new capacity and to improve the planning system for human resources in the field of health. The concrete proposal is to start a study for benchmarking the curricula for the medical specialties in the region of South Eastern Europe and to propose synchronized education programs, as well as new programs for emerging professions in the field of health care.

References

As healthcare systems evolve, new models of care and innovation in healthcare roles are required to improve patient care. Advanced Practice (AP) has been one such model within the field of Medical Radiation Technology (MRT). For more than 20 years, the Canadian Association of Medical Radiation Technologists (CAMRT) has studied AP in a variety of ways. This reflects changes that other countries, such as the United Kingdom for example, have developed in the area of AP. However, it has been challenging to find the traction required to formally develop AP roles within Canada. In the early 2000’s, a group of radiation therapists developed AP guidelines within their field. In 2004, the Clinical Specialist in Radiation Therapists (CSRT) group developed a pilot study entitled “Advanced Practice in Radiation Therapy Development”. This was created and funded through the provincial government and Cancer Care Ontario (CCO). CAMRT used this project to start down the path towards the development of AP roles at the national level in 2010. Although the CSRT work was a success in Ontario, more work was required to make this approach transferable across the country. A main product of a national survey of key stakeholders resulted in the document entitled Advanced Practice in Medical Radiation Technology: A Canadian Framework (http://www.camrt.ca/mrt-profession/professional-resources/advanced-practice/). The AP Framework gave a clear definition of Advanced Practice, set out the basic principles that all AP roles in Canada should be founded on, and highlighted that AP roles based on the available evidence improve patient care and the operation of the healthcare system in the following areas: (1) Access to care (2) Quality of care (3) Potential cost savings (4) Innovation. With the principles of AP clearly established, the next step to implementation of roles nationally was to create a process whereby proficiency in these categories was confirmed. A committee was formed to develop a pilot certification program for Advanced Practice in Radiation Therapy (APRT). The model, building on the CSRT, was also based on the experience of other countries, including the United Kingdom1. An APRT Competency Profile was created for those skill areas described as principles for AP from the Framework. Its purpose was to ensure that the practice of MRTs met the level of an advanced practitioner. The number of individuals expected to pursue AP in the Canadian
MRT community is relatively small. Economically, this called for an innovative new model to ensure a process that would be at once be valid and reliable, but also feasible given the potential candidate pool. Considering that the traditional test approach used by the CAMRT and similar healthcare certifying bodies in Canada would not fit (i.e., too expensive), an entirely novel process was designed. It is a three-phase “multi-hurdle” approach consisting of a Portfolio phase, a Case Submission phase, and an Oral Examination. Only candidates who succeed at each phase can progress to the next, ensuring most efficient use of certification process-building resources. The process was designed to be cost neutral to the CAMRT following a pilot phase, with candidate fees assessed for each Phase of the process to cover development and assessment costs. The fees assessed are also in line with fees for other similar certification processes. The CAMRT is currently piloting this certification process. Candidates have completed phases 1 and 2. The Oral Examination will be held in June 2016 for the first APRT certifications. Through the pilot, the CAMRT will evaluate all phases of the certification program to determine reliability, validity and to improve processes and make adjustments where required. Qualitative interviews, scoring inter-rater reliability and item score consistency will form the evaluation for each phase. Although still in the pilot phase, the APRT certification program has proven to be feasible with the population of the profession and innovative in the development of the program to be intensely candidate focused. There was a need for a certification program and we were able to design a cost recovering pilot program which will be followed by a fee for certification. A systematic and evidence-based approach is the only way to achieve success and current work is also underway to explore other areas for AP roles and certification in all MRT disciplines.

References


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Input for High-Level Commission on Health Employment and Economic Growth:
“How can education and training models be transformed to build a fit for purpose workforce?” CDC’s Pyramidal Approach to Field Epidemiology Training and ServiceEffective disease detection, investigation, control, and prevention require a public health workforce well-trained in field epidemiology. Since 1980, the U.S. Centers for Disease Control and Prevention (CDC) has worked throughout the world to establish and support Ministry-based Field Epidemiology Training Programs (FETPs). These programs train health professionals to be expert field epidemiologists. Many become leaders and managers in their Ministries, improving surveillance systems, strengthening capacity to address emerging health threats and endemic health concerns, and promoting a culture of data-driven decision-making. In recent years, CDC and Ministries have recognized the importance of strengthening the capacity of the public health workforce at all levels of the public health system. CDC developed three-tiered “pyramid” training to improve surveillance, epidemiologic investigation, response, and communication skills of public health workers at each health system level. Each tier focuses on improving participants’ skills within their current job responsibilities. FETP Frontline Training is a three-month in-service program focusing on disease detection and response and other public health events. Participants learn and practice fundamental skills including case definitions, disease reporting, data summarization using simple tables and graphs, case investigation, outbreak investigation and response, surveillance, data analysis and interpretation for decision-making. West Africa’s 2014-2015 Ebola outbreak reminded everyone of the need for all nations to be able to fully comply with IHRs. This pyramidal training approach greatly assists with that, complementing the IDSR outreach and training being conducted by many WHO country offices. Since 2000, CDC has provided this technical assistance to 32 nations. Through 2015, 3799 district and county personnel in these nations completed Frontline FETP training, with 6378 projected to do so through 2017. FETP Intermediate-level Training is a nine-month in-service program focusing on strengthening public health surveillance and promoting use of data for decision making at the middle level of the health system (e.g., provinces, states, and governorates). Classroom instruction and field projects focus on analysis/evaluation of surveillance data, health situation analysis, outbreak investigations, data analysis, planning and
conducting surveys, and scientific communication. In countries with both, participants in the Intermediate training may mentor those in the Frontline-level training. Since 2000, CDC has assisted 14 nations to develop Intermediate FETP training. Through 2015, 629 personnel in these nations completed training, with 923 expected to do so through 2017. FETP Advanced-level Training is the traditional 2-year program of training and service for health professionals to learn and gain experience in applied epidemiology through supervised, on-the-job, competency-based training and service. Since the establishment of the first Field Epidemiology Training Program (FETP) in Thailand in 1980, more than 50 programs with trainees from 70 countries have been launched. Since 1980, CDC has provided technical assistance to 51 nations, with 2430 trainees completing Advanced training through 2015 and 3168 projected to do so through 2017.

The triad of FETPs had 6858 cumulative graduates by the end of 2015, and are expected to have 10,469 graduates by end of 2017. Training Rhythm. All tiers use the same module or cycle approach: limited classroom instruction following extended field practice. Instruction focuses on epidemiologic practice rather than theory, with an interactive problem-solving approach, with frequent exercises and case studies to reinforce lecture material. For the Frontline and Intermediate tiers, 1 week of classroom training is followed by 3-5 weeks back on the job, during which time the participants complete an assigned field project relevant to their jobs, such as analyzing surveillance or other epidemiologic data their office collects. Participants then present and discuss their findings to their colleagues and preceptors. Conclusion: This approach is working well, covering epidemiologic workforce needs from the central to the peripheral levels of many participating countries. One question that remains is how readily such training and outreach can be extended appropriately and effectively to village and community health workers. These most local personnel are often called on routinely to play curative, preventive, and surveillance roles, often with little formal education. Another question is how best to transfer such quantitative skills to clinical health system delivery staff at all levels.

References


Submission 109

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Contribution Type: Opinion
Question Answered: 8

Contribution:

Romania is among the Eastern European countries most impacted by the health professionals’ international mobility (1-4). A combination of push and pull factors has led to increasing numbers of health professionals, especially physicians, to leave the country to seek employment and settle in other healthcare systems, mainly Western European (1,5). Physicians trained in Romania make for significant shares of foreign-trained physicians, practising in Germany, United Kingdom, Belgium and France (3). Romania’s access to the European Union in 2007, which guarantees the recognition of diplomas obtained in Romania, has smoothed the process of international mobility. With time, the international mobility of Romanian health workers contributed to decreasing the density of health professionals in some regions or almost depleting physicians in some specialties, such as intensive care. Consequently, population’s access to healthcare services has been impaired, with negative effects on population’s health indicators. The causes of high levels of international mobility have been explored only to a limited extent. Some push factors, which could potentially be addressed by Romania in order to manage the mobility, are low wages, lack of professional and personal development opportunities, poor working conditions, and corruption (5,6). Currently, these factors are addressed only partially and, as a result, it does not seem that it reversed the emigration trend. Human resources for health strategy is still expected, thus setting the scene for more comprehensive measures to address the mobility phenomenon. The measures that have been tested so far included wage increases and facilitating employment opportunities for young graduates in areas with acute shortages. These measures have not been evaluated yet in order to infer whether they have been effective or not. However, one can only assume that they did not achieve their purpose, judging by the increased number of Romanian physicians reported to be integrated in Western European healthcare system. This could be a result of the patchy character of measures aimed at increasing retention, which lacked intersectorial approaches and did not address system level problems, such as broad corruption, poor working conditions and lack of coherence and vision at micro-, meso- and macro-level in the healthcare system (6). As one could easily observe, Romania’s responses to increased health workers’ mobility have been reactive rather than pro-active. Based on international experiences, we suggest that a pro-active focus on innovative ways of optimizing the benefits of the mobility can at least complement the reactive measures aimed at reducing the harms produced
by mobility. These measures would be supported by a wealth of evidence and recommendations, such as the WHO Draft Global Strategy on Human Resources for Health: Workforce 2030, the WHO Global Code of Practice on the International Recruitment of Health Personnel, the WHO Global Policy Recommendations on Increasing Access to Health Workers in Remote and Rural Areas through Improved Retention, the Joint Action on Health Workforce Planning and Forecasting, and the EC Study on Recruitment and Retention of the Health Workforce in Europe (7-11). Starting from an efficiency-equity conundrum, we suggest that the policy options that Romania (as a source country) could employ to make mobility work better are country-to-country collaboration and facilitated returns (12). Country-to-country collaboration (materialized in bilateral agreements aimed at cost-sharing, promoting circular mobility and establishing the numbers of health professionals trained for international recruitment) would greatly benefit Romania by making the mobility process more structured and predictable. In the end, these measures could translate into a better picture of the needs that are necessary for training within the country, to cover the areas with shortages. By using facilitated returns, Romania would offer to returning professionals the opportunity to use their skills in their country, as well as guarantee employment opportunities. Irrespective of the approaches chosen, one thing Romania should focus on is making its health system more attractive for health professionals. If Romania wants to be more than a source of health professionals for other healthcare systems, it should make efforts to make itself appealing. In addition to the approaches related to its status of a source country, Romania could potentially exploit its destination country status, for citizens of Moldova. Romania and Moldova could set the grounds for ethically-led, responsible and sustainable approaches, such as circular migration. To sum up, evidence synthesized here point towards an immediate response from Romania aimed at managing the mobility of its health workers. We suggest that two feasible approaches are country-to-country collaboration and facilitated returns, on the grounds that, in parallel with this, Romania will continue the efforts to reform its healthcare system to make it more attractive.

References


Health systems require a skilled and motivated workforce to achieve a “grand convergence” in health and deliver on the promise of universal health coverage. A decade ago global health worker shortages totaled 4.3 million. Despite progress in several low- and middle-income countries, significant deficits persist. Emigration plays some role in the enduring imbalance between health workforce size and disease burden, motivating promulgation of the WHO Global Code of Practice on the International Recruitment of Health Personnel. Additionally, many countries lack the basic infrastructure for medical education. Insufficient workers and evolving health needs have necessitated innovation in two areas: (1) restructuring the workforce for effective service delivery, and (2) training the various cadres of health professionals. First, since 2000, the scarcity of clinicians, new technologies, the AIDS crisis, and a renewed emphasis on primary health care have driven investment in and professionalization of community health workers (CHWs) in many poor countries. Task-shifting is useful but has limits. Last year expanding access to surgery joined the litany of global health priorities—for the foreseeable future, delivering essential surgeries without doctors will be impossible. Global momentum toward a wide range of health goals compounds the challenge of producing adequate human resources for health. Second, countries have an urgent need to develop new approaches to education and training that will capacitate their health systems and improve prospects for stable, high-quality employment. Goal 4 of the Sustainable Development Goals recognizes that education priorities must shift towards systems that foster inclusive and equitable quality education that promotes lifelong learning. If secondary education is considered a marker for future employment, prospects are grim: in 2012, the gross enrollment ratio was 85% in lower secondary and 62% in upper secondary education, with a stark disparity across regions and falling to a worrying 55% and 32% respectively in low-income countries. For those youth that are enrolled, secondary education curricula often are not relevant to the world of work, leaving them disengaged and unable to find employment; the ILO estimates 73.3 million unemployed youth in 2014. Innovative approaches are thus needed to close the skills gap and allow youth to find and maintain employment in the health sector and elsewhere. Mechanisms that leverage the role of technology, build closer partnerships between educators and industry, and emphasize relevant training to meet market needs are already being tested. For example, Literacy Bridge’s Talking Book delivers health and agriculture lessons via
audio to remote, rural communities in Ghana, leading to individual learning and behavior changes. [14] The Unidad Académica Campesina-Carmen Pampa (UAC-CP) in Bolivia offers courses in a mix of subjects (including nursing) to the rural poor; students engage in experiential, hands-on learning and receive an undergraduate degree upon graduation. [15] Interestingly, operating costs are subsidized through the sale of products such as coffee and vegetables produced by UAC-CP. For those already in the workforce, blended learning, which combines e-learning and conventional classroom teaching can be used to upgrade skills, as is being done through initiatives such as the Health[e]Foundation. [16] Indeed, such a model permits access to learning in even remote areas, and the online web portal allows for shared learning across both national districts and countries.

Moving forward, there are promising avenues to cultivate a vibrant health workforce. Governments, development agencies, and advocates would benefit from better estimates of both current spending on health worker education and resource needs to achieve national and global goals. Fiscal gap analysis would allow policymakers to explore conventional and innovative financing from budgetary prioritization to public-private partnerships. New ideas and models should be tested and scaled, using cutting-edge approaches to measure impact and learning. For example, collaboration between education and healthcare stakeholders harnessing technology to increase access to learning and, in turn, leading to better health care, should be fostered. Importantly, the scope of different types of technology – and the corresponding infrastructure and financing needed – should also be examined. Rigorous performance metrics could also help elicit private investment through social impact bonds linked to learning outcomes or industry sponsorship tied to job placements for top learners. Lastly, alternatives to university-based degrees – such as modular or course-based certification – should be tested. Ultimately, whether new education models succeed will depend on actors from both health and education jointly devising curricula and pedagogy well suited to a country’s health workforce needs.

Sectorial strategies should be mutually reinforcing, and skills-building interventions should be consultatively designed to meet the needs of healthcare providers. Such investments in health workforce training will reap benefits for both sectors, strengthening the foundation for robust and sustainable development.

References

More than thirty-five years since the Alma Ata Declaration affirmed the importance of equitably distributing health system resources (1), chronic health workforce shortages in West Africa’s rural and remote communities intensified Ebola’s rapid spread. (2) Health workforce mal-distribution represents an acute challenge for rural and remote communities, where about half the world’s population lives, but where only 38% of nurses and less than 25% of the world’s doctors reside. (3) In countries with limited resources and competing demands like Liberia, remote communities are exposed to a triple bias. The public sector, which favors areas that are easier to reach to maximize limited resources, is often unable to prioritize remote populations. The private sector, which favors areas with high concentrations of customers, doesn’t see market potential. The social sector, which favors reaching more people in fewer areas at less cost, deems them too expensive to serve. This triple bias and the mal-distribution of health workers contributed to early disease surveillance failures, emergency government expenditures, and economic devastation that left governments even less able to rebuild already-weakened health systems. Combating the triple bias and achieving the Sustainable Development Goals (SDGs) will require inter-sectoral partnerships that better align risks, benefits, and investments for global public goods like Community Health Workers (CHWs). Resilience with a bias toward action to mitigate the risks posed by challenges like Ebola requires innovative, focused, and country-led approaches to health workforce investments. Strategies to address these challenges include the UN’s Every Woman, Every Child Global Strategy 2.0 (4), WHO’s Workforce 2030(5), Global Health Security Agenda, and One Health. All require long-term, targeted financing to focus public sector health workforce investments that mitigate health and economic shocks. Resources and capacity for epidemic preparedness and response should be targeted toward the communities in which needs are greatest, and professionalized CHWs should comprise the backbone of inter-sectoral solutions to build economic and health system resilience in remote communities. Embedding CHWs within the public sector instead of relying on volunteer labor will generate needed traction between remote populations and governments working to achieve critical health goals such as universal health coverage as well as economic goals like youth...
employment, education goals like female literacy, and social goals like fortifying women’s roles in domestic and community hierarchies. These goals all converge in CHWs. Financing for CHWs in remote communities also has a positive return on investment (6) for the government through improved economic productivity, and contributes to a productive and healthy cycle of greater employment opportunities and improved health (7,8) for remote communities. Partnerships for resilience with the education sector demonstrate the potential impact of new approaches to alignment and coordination to improve the distribution of clinical skills. Liberia’s education sector, for example, is increasing its focus on disease surveillance training for health workers, providing Water, Sanitation, and Hygiene (WASH) and health education in schools, and enhancing pre-service training for multiple health worker cadres as part of an integrated Health Workforce Program in which CHWs play an important role. By targeting the inclusion of youth and women for health employment as CHWs, education investments will be leveraged to improve health employment and mitigate health emergencies while contributing to the achievement of the SDGs. New inter-sectoral financing pathways for resilience like the World Bank’s Global Finance Facility (GFF), USAID and UNICEF’s Integrating Community Health program, and the World Bank’s Ebola Emergency Response Project (EERP) project create fertile ground for new partnerships to build new financing structures that crowd resources into remote communities, streamline effort duplication, and curtail partner fragmentation across sectors. Fuller consideration of the health and economic impact of inter-sectoral investments through the development of investment cases, for example, helps governments and other stakeholders clarify and prioritize mutually-reinforcing investments to improve the return on investment for all stakeholders. Focusing new resources toward women and youth in remote areas, meanwhile, simultaneously addresses gaps and opportunities in agriculture, health, labor, and education with strong government leadership. Building resilience requires an integrated approach spanning government ministries, donors, NGOs, and the private sector to protect health and health employment against economic shocks, and to prioritize the protection of health employment as a global public good when economic shocks occur. Rather than exclusive reliance on a ‘top-down’ approach defined by target ratios to identify health workforce gaps, ensuring Universal Health Coverage requires that all people have access to health workers, especially in remote communities. Community Health Workers should be the cornerstone of a people-focused, country-led, ‘bottom-up’ approach to investment that delivers health for all.

References


Investment in Medical Physics in LMIC is indispensable and will produce multiple paybacks towards the Health Care SDG in those countries. I vigorously urge the creation and expansion of Medical Physics education, training and employment opportunities as part of the health care force needed to achieve the SDG in LMIC's. Medical Physics is the application of Physics methods and science to the diagnosis and treatment of human disease. [International Organization of Medical Physics-IOMP, American Association of Physicists in Medicine -AAPM] Since its beginnings, the discipline has made many essential contributions to the capabilities of medical imaging as a diagnostic tool and to the treatment of cancer. [e.g.: History of Medical Physics, The Lancet 2012] It has long been a common belief that cancer is not the most urgent problem in low- and middle-income countries but cancer is now recognized as a silent epidemic that affects not only the sick but society in general. Cancer as a global crisis is abundantly documented and the gap between High income and LMIC’s is now recognized as a major human and societal need to be addressed [e.g.: Closing the Cancer Divide- An Equity Imperative] A recent Lancet Oncology Commission report documented the growing incidence of Cancer in the developing world and projected the economic benefits, if it were will be addressed in the next twenty years, amounting to hundreds of billions of Dollars in LMIC’s alone[Atun et al., Lancet Oncology 16: 1153-1186; 2015] Radiation Oncology is one of the principal tools in this effort, for it is known that improved Radiation Oncology provides effective and more successful treatment of cancer. Accordingly, The Global Task Force on Radiotherapy for Cancer Control quantified the needs in equipment and personnel for 2015-2035. 

http://www.thelancet.com/journals/lanonc/article/PIIS1470-2045(15)00285-5/fulltext. Medical Physicists are one of the major professions essential to meet these goals. Professional workforce development is a very labour and time intensive undertaking. Lack of trained Medical Physicists typically results in delays of equipment deployment and carries the risk of inadequate use and injury to patients and personnel. Medical Physics has been officially recognized by the International Labour Organization in 2012 and are considered to be an integral part of the health workforce alongside Radiation Oncologists, Radiologists and Nuclear Medicine physicians [ISCO-08]. Nonetheless, their inclusion and recognition in the Healthcare structures in most LMIC’s is still lagging. As a result the development of local expertise and the corresponding work opportunities poses a serious limitation to the implementation and safe use of modern equipment and technologies. The IOMP, along with many Medical Physics national organizations, academic and clinical institutions, and volunteer organizations in High income countries (e.g.; the newly formed Medical Physicists Without Borders) are engaged in a variety of efforts to address these challenges.
through the support of education and training of professionals that can be self sustained in the long term. Several of these incorporate remote communication and Information technology, which requires improvements in infrastructure and access. The creation of professional opportunities in the health care and academic sector is a major factor for the sustainability of these efforts. Clinical medical Physics being a technology related field, both for diagnosis and for therapy, will increase the availability of well-trained professionals and the creation of good employment opportunities will halt the brain drain tendencies. Moreover, the financial and policy support of local institutions, governments and regulatory agencies is vital to their potential success. Therefore, I urge the Commission on Health Employment and Economic Growth to include Medical Physics in the recommendation for action.

References
Design of a new procedure for maintenance of high tech diagnostic equipment: with improved Patient Access
Ledina Picari, MS, Head, Health Technologies Unit, Ministry of Health Albania. Introduction: (a) The dependence of healthcare programs on technology for the delivery of their services is at an all-time high. The technology life cycle consists of the stages of innovation and commercialization, assessment and selection, regulatory and performance compliance, installation and commissioning, maintenance, upgrading and the final stage of retirement and replacement. Each stage requires expertise, proven methodology and competent management that can deliver safe, appropriate, efficient and reliable technology to support the delivery of health services every time there is clinical need. (b) The technology total life cycle can be measured using indicators that monitor population health outcomes, services accessibility, cost per procedure or patient-day, and change in the volume of adverse events. Adequate management of the technology life cycles translates to improvement in each of these indicators but most importantly in the ability to program for extending quality and efficient basket of services. (c) Biomedical and clinical engineers are qualified and competent to practice in the health services sector and to facilitate the achievements of goals as measured by these indicators. This document illustrates one key example for how clinical and biomedical engineers made significant improvement in patient Access and thus improved the role of appropriate, safe and efficient technology in the service of the population where they practice.

Background: (a) Before September 2014, for high technology diagnostic equipment - Linear Accelerator, MRI, CT Scanners, and Angiography, there were no standard procedures and no standard maintenance contract. Maintenance of devices was done by each hospital, with some of the expensive spare parts not included. There were different prices for the same devices, sometimes short term contracts, and gaps between contracts. (b) As a result, there were frequent device failures causing delays in medical diagnoses and treatment, high costs due to frequent interventions, long downtimes causing increased waiting time, delays when referred to other facilities or increased patient costs when referred to private clinics. Maintenance costs were typically 10-12% of the purchase price,
and there were difficult relationships with the service providers due to service denial upon lack of payment caused by poor budget planning. Intervention: (a) We designed a new approach based in the best international practices and recommendations – Full risk, 2 year service contracts – through: i. A negotiation process regarding price and conditions; manufacturers’ representative meetings to present the new approach and for authorized distributors confirmation; and open tender procedures for international participation - to avoid speculation of a monopoly situation. Outcomes: (a) Increased access to diagnostic devices. (1) At Durrës Regional Hospital, the number of CT Scanner examinations 3545 (2013), and 3157 (2014) increased to 6602 (2015). (2) Similar evidence is available for 12 other Regional and two University public hospitals for Ministry of Health. (b) There was increased availability to local health care diagnostic service. (1) At Durrës, CT downtime was 115 days (2013), and 137 days (2014); it decreased to 0 (2015). (c) Efficient use of the public funds. (1) Maintenance cost decreased from 10-12% of the purchase price to 8%. (2) Budget is now guaranteed due to fixed price. 6. Human Resource Implications a. The overseeing Unit was established in 2010, now called Medical Devices and Systems as part of Information Technology and Medical Systems Department b. The Head of the Unit is a Biomedical (Clinical) Engineer i. There are also Clinical Engineers at each Regional and University Hospital ii. The Unit is responsible for the overall supervision of medical devices in the health care sector. (3) The mission of the Unit is to increase patient and user safety through policies and action plans. (4) The Unit has responsibility for some key examples: 1. Design of laws and sub-laws, orders of the Minister, policy documents, recommendations and guidelines regarding the use, management and maintenance of medical devices as part of policy making process. 2. Defining actions for improvement of health systems functionality in accordance with Ministry of Health health policies. 3. The first Albanian Law on Medical Devices No. 89 was approved in 2014, prepared by the Unit in collaboration with the Law Department. Three technical regulations in approximation of the three European directives have also been approved.

References
**Submission 114**

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<th>Name/Position</th>
<th>Bjorg Palsdottir, Chief Executive Officer</th>
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**References**

[5] Ernst & Young. Evaluation and Investigative Study of the Queensland Rural


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Training for Health Equity Network’s (THEnet) is a translational research partnership of 11 health workforce institutions in all 5 WHO regions, which in collaboration with community and government stakeholders developed a Framework for Socially Accountable Health Workforce Education (THEnet Framework) [1,2]. The Framework focuses on identifying needs the school must address, assessing governance, resource allocation, education, training, research, services and evaluating impact of institutional and educational strategies on health, equity and health system development. This submission presents emerging evidence from health professions institutions that have applied the Framework in their context. The Framework and linked evidence could guide and inform investments in pre-service education strategies to produce a fit-for-purpose workforce that delivers a better ‘return on investment’ with respect to community health outcomes and expectations, and their social and economic development. *While more research on the economic and social return on investment of institutional and educational strategies is needed, the below emerging evidence from research in high, middle and low income health professions education programs, supports two policy recommendations.?

- Community based, community engaged health workforce education as well as creating primary-care oriented training and new career pathways in rural and remote communities brings investment and income into communities, reduces costs and promotes retention. [3,4,5,6,7,8,9,10,11,12,13,14,15,16]?
- Incorporating innovative programs such as focus on and screening for social determinants of health and integrating community health workers into the education and service delivery models provide cost effective care. [17, 18, 19,20]?
- Community engaged service-learning and research improves health and motivate communities to address health challenges and root causes through innovative partnerships. Ongoing research shows communities are interested in partnering with education institutions, government and private business other stakeholders to explore different types of innovative financing for health professions education institutions in their communities. [21,22,23]?

Policy recommendations: (1) Prioritize domestic public investment in health workforce education partnerships that promote community based, community engaged learning with a focus on...
rural and disadvantaged communities where there is evidence of high social returns. (2) Prioritize indicators and data collection on socially accountable transformative health workforce education to provide direction on institutional strategies and investment priorities for countries at different levels of development. *THEnet is finalizing a study on the impact of community-engaged, equity-oriented schools using social accountability principles on health services, outcomes and intermediary factors in the Philippines, with a follow-up study on the social and economic return on investment in affected communities. Results of phase 1 expected June 1st 2016.

References


Development of Clinical Engineer (CE) Certification in China

Dan Zhou, DBA, President, CE branch of Chinese Doctors Association, President, CE Branch of China Biomedical Engineering Association, Min. of Health China. Contribution Addressed: “What are the social and economic returns on investments into health employment and what are the opportunities to maximize these? How could these returns on investment be measured?” Introduction: (a) The dependence of healthcare programs on technology for the delivery of their services is at an all-time high. It is therefore critical that the technology will be managed in the most optimal way. (b) The technology total life cycle can be measured using indicators that monitor population health outcomes, services accessibility, cost per procedure or patient-day, and the change in the volume of adverse events. (c) Biomedical and clinical engineers are qualified and competent to practice in the health services sector and to facilitate the achievements of goals as measured by these indicators. This document illustrates one key example for how clinical and biomedical engineers made significant improvement in (Health Technologies) Safety & Quality and thus improved the role of appropriate, safe and efficient technology in the service of the population they serve. Background: (a) Before 2005, (1) Qualified clinical engineer (CE) groups in hospitals turned out to be a key factor to ensure the safety, effectiveness, and reliability issues of equipment. (2) Hospitals have not yet set up the occupation positions for CE. (3) CE have no appropriate professional qualification certification and occupation access. (4) There is serious insufficiency of CE technical personnel. (5) The number of engineering technical personnel is equal to 5% of all health care staff. (6) The clinical engineering staff with Bachelor degree or above only accounted for 37%. (7) Human resources of medical engineering in China cannot keep up with the development of new technology and equipment. (b) International clinical engineer (CE) certification was introduced. From 2005 to 2012, the Medical Engineering Division (MED) of China Medical Association (CMA) hosted six sessions of international clinical engineering (CE) certification with advanced training courses and certification examination. More than 800 clinical engineering technical staff from hospitals and universities participated in the examination; 252 people passed and were awarded an international CE certification covering 18 provinces and 90 tertiary hospitals across China. (c) The CE Association of China was set up to establish a continuing education system for CE staff. (1) We established the professor advisory committee to oversee this process for the whole nation. (2) A Chinese exam question bank and the theoretical exam
questions were developed. (d) Chinese Registered Professional Clinical Engineer (PE) Certification training/examination course was improved. (1) We established a two-level certification system: CE Certification for Senior Clinical Engineer, while PE for Junior Engineer. (2) All PE certification candidates need to pass 3+X exam consisting of online three basic theories tests and then a technical operation test including maintenance of CT/MRI, logistics management, and metering. (3) Only 25% of candidates passed both the theoretical and technical exams and were authorized as PE. (4) The professor committee members were selected from across the whole nation and Chinese theoretical and technical exam questions bank have been built. (5) Two Chinese PE Certification examinations were held since 2012. 256 people enrolled in the examination; 78 people passed the exam and obtain a registered clinical engineer certification (PE) on the first. Outcomes: (a) Improving the professional discipline and human resources of CE. (b) Within the 252 CEs awarded CE certification, 9 people were promoted as vice presidents of 3A hospitals, half were selected as president of provincial CE societies, and most were promoted as the head of CE departments. They became the main leaders and guarantee of further CE development in China. (c) Promoting quality control (QC) of medical devices. (d) In recent 10 years, QC is stressed in every certification session. QC is carried out in over more than 1,000 hospitals in China. More than half of submitted papers in annual conferences for the CE branch of CMA are about QC. (e) One good example is the story in West China Second Hospital, Sichuan University, Chengdu. Under the leadership of Xi Wang, whose group provided excellent candidates in the first CE certification exam, they developed the national standard of infant incubators and carried out training every year. There have been no more adverse events or medical disputes about infant incubators in the whole area since that time.

References
[1] Case study with evidence submitted to IFMBE CED Global Success Story project in March, 2016
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<td><strong>Name</strong></td>
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Mexico Ministry of Health: Establishment of state biomedical engineering centers

Roberto Ayala, Biomedical (Clinical) Engineer, CENETEC Health Technology Unit, Ministry of Health. Contribution Addressed: “What are the social and economic returns on investments into health employment and what are the opportunities to maximize these? How could these returns on investment be measured?”

Introduction: (a) The dependence of healthcare programs on technology for the delivery of their services is at an all-time high. It is therefore critical that the technology will be managed in the most optimal way. (b) The technology total life cycle can be measured using indicators that monitor population health outcomes, services accessibility, cost per procedure or patient-day, and the change in the volume of adverse events. (c) Biomedical and clinical engineers are qualified and competent to practice in the health services sector and to facilitate the achievements of goals as measured by these indicators. This document illustrates one key example for how clinical and biomedical engineers made significant improvement in Health Systems and thus improved the role of appropriate, safe and efficient technology in the service of the population they serve.

Background: CENETEC – the national Ministry of Health Technology Unit - established state biomedical engineering centers (called CEDIB) in the organizational structure of the 32 state public health services (state ministries of health) in México, to assure the safe, efficient and rational use of medical equipment through the processes of health technology management (HTM), with guidelines and tracking from CENETEC. The HTM responsibilities of the CEDIB covers all medical equipment from all the hospitals under the jurisdiction of the state ministry of health. Intervention: (a) When the initiative was launched in 2008 there were only 11 states that had someone in charge of the HTM tasks at the state level, and not necessarily a biomedical (or clinical) engineer (BME or CE). Now, 29 states have incorporated a professional that is in charge of HTM or participates in the team with that responsibility. (b) Two of those states (Baja California Sur and Guanajuato) have an official position in the state structure, as Sub Directors of Biomedical Engineering, with personnel to cover the HTM responsibilities. (c) Since the incorporation of CEs at the state ministry of health level, several benefits have been achieved: (1) Participation in medical equipment planning, using tools generated by CENETEC to help making better decisions, and thus assuring that the technology is correct for the needs of healthcare in the state. (2) Use of proper technical specifications for medical equipment for the acquisition process. (3) Establishment of preventive maintenance programs and
vigilance of the service provided by vendors. (4) Continue training programs for medical equipment users. Outcomes: (a) in terms of saving costs, there are reports that show that, since the incorporation of the CEs, there been savings in maintenance costs as much as ten million pesos (645,000 USD) annually. Such savings have been achieved by taking care of non-critical medical equipment, reducing unnecessary spare parts stocks and, mostly, by supervising third-party service contracts, reducing costs without compromising the service to the equipment. (b) At least four CE departments at state level had the support to get tools and test equipment in the past two years, in order to improve the quality of the in-house service. In some cases more CEs were hired to give technical support to the coordinator in chief. (c) The CEDIB guideline for HTM processes also proved to be of much help for any CE department in hospitals, regardless of its sector (public or private) and it has been consulted from other Latin American countries as well. Recently in a PAHO conducted workshop, all the countries from the Central America region accepted the use of this guideline for their local HTM strategies. (d) It’s also to be noted that since the initiative began, the educational offer of BME education programs have increased exponentially. In 2000 there were no more than 10 universities giving the program and now more than 45 universities across the country with a BME program or equivalent. Many of them have approached CENETEC to get advice on how to improve their educational programs to strength the knowledge on CE and HTM, recognizing the importance of the subject and the leadership of CENETEC in the matter.

References
[1] This project was submitted to IFMBE CED as part of a global success story initiative in March 2016.
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Contribution: South Australia Region: Internal Endoscope Support to Improve Management of Key Resources. Anne-Louise Smith, Society of Medical & Biological Engineering, Adelaide, South Australia. Contribution Addressed: “What are the social and economic returns on investments into health employment and what are the opportunities to maximize these? How could these returns on investment be measured?” Introduction: (a) The dependence of healthcare programs on technology for the delivery of their services is at an all-time high. It is therefore critical that the technology will be managed in the most optimal way. (b) The technology total life cycle can be measured using indicators that monitor population health outcomes, services accessibility, cost per procedure or patient-day, and the change in the volume of adverse events. (c) Biomedical and clinical engineers are qualified and competent to practice in the health services sector and to facilitate the achievements of goals as measured by these indicators. This document illustrates one key example for how clinical and biomedical engineers made significant improvement in (Health Technologies) Management and thus improved the role of appropriate, safe and efficient technology in the service of the population they serve. Background: (a) The Clinical Engineering team for the Department of Health in South Australia conducted a 2-year trial to prove endoscope uptime could be increased with in-house (internal versus manufacturer) support at no increase in service cost. (b) Started pilot study mid-2012 (South Australia). Baseline: (1) Average repair turnaround time 50 days. (2) 12% repairs completed within 30 days. Intervention: (a) Set-up and implement pilot study. (b) Two specialist biomedical technicians received intensive training for 2 weeks in USA. (c) On their return, they trained multiple staff in easy repairs, and more senior staff in moderately difficult repairs. (d) Three specialized workstations were created at the 3 major hospitals and 3.5 staff allocated to endoscope repairs. (e) Ongoing support by specialists to supervise and maintain high quality of repairs. (f) Workforce Health and Safety risks mitigated by good work practices (gloves, eye protection, users sign off on sterilization before repairs). Outcomes: (a) Endoscopes available when needed for patient treatment; (1) Turnaround time for repair decreased (2) Average 12 days (down from 50 days). (3) 61% repairs completed within 30 days (up from 12%). (b) Costs reduced: Less spare scopes needed in stock and cost of service ratio for endoscopes reduced from 18 to 10% (c) The 3.5 staff were made permanent to continue in-house endoscope support (650 flexible endoscopes). (d) Now investigating other biomedical technologies with long repair times with the view...
of bringing support in-house

References

[1] This project was submitted as part of IFMBE CED global success story initiative
Contribution Addressed: “What are the social and economic returns on investments into health employment and what are the opportunities to maximize these? How could these returns on investment be measured?”

Background:
Before June 2013. Although Ministry of Health of Turkey has more than 800 hospitals, there was no systematic National Health Technology Management (HTM) Program for these Public Hospitals. There was some units named as “Maintenance Unit” but there wasn’t well-organized CE/BME Units in Hospitals and in Association of Public Hospitals (Regional Managements of Hospitals). There wasn’t appropriate inventory management system. There wasn’t a proper medical equipment maintenance system, therefore it wasn’t possible to collect good data on medical equipment maintenance plans, uptime/downtime, spare parts, costs and etc. There wasn’t any control about infrastructure needed for medical equipment. There wasn’t any process so that post market surveillance and vigilance requirements were ensured. Mostly, there wasn’t technical staff contribution on technical specifications during the procurement process. Results and Problems: It is not possible to perform needs assessment, budgeting, device and staff planning appropriately. Total cost ownership assessment not performed. Communication problems after medical equipment failures. Some equipment not used and waiting to be repaired for long time. Patient planning in case of emergencies a problem. Medical equipment used inefficiently. Medical Equipment that was not in operation, which required disposal, was still in inventory. Same devices were purchased with different prices by different hospitals, even there was a central asset management system. Equipment, with features that might not be used by hospital, was purchased. In case of any recall by manufacturer/regulatory authorities, only possible to find the device according to manufacturer’s declaration. Yearly inspection/test of medical equipment not be performed in a proper way. Intervention: (a) We worked on medical device nomenclature system, redesigned the current inventory management software to ensure correct registration of the equipment in terms of name, description, manufacturer, model, condition, serial number, labeling and etc. (b) established clinical engineering units in each hospital and each regional public hospitals association; job descriptions and staff requirements were determined. (c) trained
regional clinical engineering managers about HTM system. (d) designed a software that allows to analyze costs per equipment (including separate nomenclature for spare parts and consumables). (e) prepared example documents i.e. medical equipment maintenance schedule, inventory data collection form, disposal procedure, incident report procedure and etc. (f) prepared guidelines about how to perform registration to inventory, inspection/test of medical equipment. Outcome: (a) Appropriate medical equipment inventory was obtained (b) At the beginning (August 2013) the data entered to the new inventory software was %0, in October 2014 it was 40% and in April 2015 it was 88%, that means 88% of all medical equipment is included in inventory with new nomenclature, manufacturer name, model and other inventory information. (c) The equipment which is not in use, not repairable and needs disposal is eliminated. So the number of medical equipment was 709742 pieces in Oct 2014 and decreased to 656996 in April 2015. (d) The correct naming for medical equipment. For example before our study some ECG devices were registered with their manufacturer name i.e. MORTARA ELI 250/ EKG DEVICE, within the new nomenclature system Biomedical Type is ECG (ELECTROCARDIOGRAPH) and Biomedical Definition is ECG DEVICE, 12 LEAD, WITH MONITOR. (e) Patient and service planning can be performed for emergencies and disasters. (f) National Medical Device Nomenclature Systemi. 38.047 code for general consumable/disposable medical devices, 4.331 codes for laboratory consumables, 1.639 code for surgical instruments, 2.754 for medical equipment, 6.852 codes for medical equipment related spare parts and consumables. Price analysis for medical equipment and other medical devices. We have prices for 656996 medical equipment in the inventory and additionally for all other medical devices purchased by hospitals so it is possible to make price analysis using nomenclature system (codes including device type and definitions) and also by manufacturer name or gs1 barcodes. Real costs of medical equipment maintenance were obtained. At the beginning of our study the maintenance costs were not entered appropriately. For one regional public hospitals association the medical equipment maintenance cost increased to 413% from Dec.2013 to Dec.2015. But in fact it is not an increase due to increase expenditures, it is an increase as a results of correct data acquisition by studies of Clinical Engineering Units.

References

[1] This project was submitted to IFMBE CED s part of a global success story initiative in March 2016.
Commitment to achieving UHC demands that the conversation pivots to determining who will deliver clinical care, especially in the most remote areas. Under-represented cadres in these conversations are the Clinical Practitioners/Associate Clinicians (AC). Previously referred to in the literature as “non-physician clinicians,” in Sub-Saharan Africa these cadres include clinical officers, medical licentiates, assistant medical officers, tecnicos de cirugia, etc. In developed countries they include physician assistants and associates. Through published and unpublished evidence, this submission aims to situate ACs as an effective, cadre of health professionals expanding clinical care to areas where few physicians settle; to identify areas for action to sustain ACs; and to advocate for a common cadre title that would unify ACs globally. Health systems in both high and middle/low income countries are incorporating ACs into the workforce. The global surgical and anesthetic workforce is increasingly supplemented by ACs (1), including the provision of life-saving obstetric surgery (2-5). ACs perform over 80% of caesarean-sections in rural Malawi, Mozambique, Tanzania and Zambia, and WHO recognizes ACs and advanced ACs as critical players to reduce maternal deaths in Africa and globally (6). Beyond surgery, through a new task-shifting initiative in Mozambique, the emergence of Psychiatric Technicians has allowed for a massive expansion of their mental health programs (7). Evidence highlights that the quality of care provided and the safety of the ACs outcomes (2, 3, 8, 9) is equivalent to that of physicians. ACs demonstrate high retention levels (10), cost effectiveness (11), and acceptability to community and health professionals (12-14). Among the several factors found to retain productive ACs in the health system, consistent, supportive management and supervision was found to be more salient than several other factors, including pay (15). But despite expanding access to care, ACs are inadequately acknowledged and supported. Their lack of voice and representation at global, regional and national levels has led to their exclusion from government policies, and workforce strategies and census, making them feel under-appreciated, under-recognized (16), and at times unjustly compensated. Key research findings reveal that: (a) National level policies, curricula, regulatory frameworks, professional councils, and district health authorities hold incongruent understandings of the scope of ACs and these
expectations differ from the actual content of AC practice (17). (b) ACs who felt that their current level of supervision was inadequate were more likely to report burnout, depersonalization, and perceptions of organizational injustice (15). (c) Provider perceptions of poor accountability of staff, the influence of staff hierarchies on decision making at critical points in the care process, have negatively impacted staff motivation and health outcomes (15, 16). (c) Despite the low likelihood of international migration among such cadres, there is the chance of migration from the public to the private sector (18). Preliminary unpublished data from research focused on the implementation of AC programs in Zambia and Kenya reveal that the lack of well-articulated regulatory processes including clear scopes of work communicated to all stakeholders; inadequate integration of the ‘new’ cadres including ACs into the overall human resource staff establishment at national level; and lack of attention to developing a professional career pathways for ACs, were not only demotivating factors for the ACs, but prevented them from working to their full capacity. In contrast, implementation was positively impacted by training programs designed to enhance rural retention (including clinical training attachments of ACs in rural hospitals, bonding, and weighted selection of applicants from rural districts); flexibility in the decision space accorded district level managers to make decisions regarding the posting and support of ACs; and the presence of strong advocates for ACs, in the form of the Zambia Medical Licentiate Association provide a voice for ACs, albeit outside the formal health system. At a regional level, the Africa Network of Clinical Practitioners (ANCP), formerly known as the Africa Network of Associate Clinicians brings together ACs from 13 countries in Sub-Saharan Africa, and provides a platform for addressing AC issues, including the cadre title. Given the array of names for the AC cadre globally and regionally, the ANCP is advocating for the adoption of the collective title: “Clinical Practitioner” to replace “Associate Clinician”. The CP title has not been used by other health professionals, distinguishes the cadre from other ‘associate’ classification as per ISCO – ILO, and better reflects the independent nature of the cadre’s comprehensive clinical practice. This change in title was adopted at the 2015 ANCP AGM, and the ANCP now seeks to represent the voice of the ACs/Clinical Practitioners in the current climate that is dominated by the opinions of the dominant, well-resourced and networked global north.

References


Footnote: AC training is shorter than that of physicians, is predominately clinical skills based, and varies according to the country – ranging from emergency surgery, to diagnosis and treatment of infectious and non-communicable illness, for adults and children. The training programs are two to four years post-secondary education and most include internships.
This submission is an excerpt from the ICN Policy Brief: Tomblin-Murphy, G., Elliott Rose, A. (2015). This submission is being made by ICN on behalf of the authors with their permission. Nursing Leadership in Primary Health Care for the achievement of SDGs and HRH Global Strategies. Strengthening primary health care (PHC) in support of universal healthcare coverage continues to be a focus of health system reform worldwide. (1,2,3,4,5,6,7) Both peer-reviewed and non-peer reviewed papers include several key messages to improve PHC. These include: the need for a focus on the social determinants of health; transparent and accountable funding processes; improved access to health services supported by appropriate information technology; and interprofessional practice where quality and outcomes are regularly monitored. (8,9) Much of the health re-design that is recommended focuses on models that embrace interprofessional practice with health team members who are supported to practice to full scope and who understand each other’s roles. (10,11,12) For many healthcare providers, practicing to full scope and being engaged with health colleagues, increases autonomy,(13) improves practice satisfaction (14) and improves recruitment and retention. Evidence also suggests that healthcare should be designed and delivered to support patient- and family centered health care. (15,16) Nursing full scope practice in team-based primary care has been found to be cost effective and improves quality of care, increased patient satisfaction and addresses issues of access and equity, particularly in underserviced areas and populations. (17,18,19) In many PHC settings, having nurses as full members of the PHC team is essential to meet the complex health and social needs of populations. (20,21,22) PHC delivery by nurses, including nurse practitioners for acute and episodic care, chronic disease management and practice operations results in improved quality of care, efficiency and decreased cost. Maximizing the benefit of nurses practicing in PHC requires a commitment to progressive policy regarding funding and public awareness of nursing roles; competency-based nursing that maximizes nurses’ scope and the optimization of the nurses role in PHC with comprehensive process and outcome measures. (23,24) Additionally, authors of a Cochrane review found that depending on the context of care, appropriately educated nurses provide care comparable to primary care physicians with similar patient outcomes. (25)
Nurses are educated with a holistic lens so that all facets of a person’s health and well-being are considered when planning and delivering care. Therefore, with an increasing focus on the social determinants of health, nurses are prepared to provide care based on that broader understanding of health. Nursing education also promotes developing therapeutic relationships with patients and families to fully understand their stories and life contexts in order to individualize care plans and assist people in navigating the health and social systems. However, current models of health delivery still tend to focus primarily on the treatment of illness, rather than focusing on other key social determinants of health. In remote communities and/or in low-middle income countries, much of the care delivered at the local level depends upon the expertise of community health workers or nursing assistants. Nurses and nursing play an important role in supporting their colleagues working in communities through advocacy, mentorship, collaboration and by recognizing the important contribution of nursing assistants and community health workers in maintaining local services. In addition to being practice leaders, nurses at the organizational and system levels are leading strategic conversations about health system transformation in PHC. As well, national nursing associations and international organizations, such as ICN, are strong advocates for the strengthening of PHC through health system change based on the needs of populations and focused on the SDGs and UHC for all. It requires change that is evidence-informed, gender-focused and with a shift from predominantly hospital-based care to seamless continuum care, inclusive of the community and home.

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References (continued)


Systematic Review, 18 (2).


The following submission is an excerpt from an ICN Policy Brief: Salmon, M. (2015). Contributions of Nursing and Midwifery Enterprises to Achievement of Human Resources for Health Targets and Sustainable Development Goals. The wellbeing of women is closely connected to that of their families, communities and society at large. Recognition of this relationship has underpinned longstanding investments in both the global health and international development. Health sector efforts have largely focused on service delivery to women, often relating to reproductive and maternal-child health. (1) In contrast, international development investments have focused on women's empowerment, including widespread support for ownership of enterprise and control of assets; education and training; and larger societal engagement. (2) Research demonstrates that specific combinations of the aforementioned contextual factors will influence the health and well-being along with economic opportunities of women. (3) The importance of bringing together health and development efforts to maximise health and social gains is reflected in the global Universal Health Coverage (UHC) and the Sustainable Development Goals (SDG) agendas, which require collaboration and innovation across sectors in order to forge progress in achieving their aims. Both health worker cadres represent a significant percentage of formally employed females in most countries. In addition, factors such as the growth in chronic disease; (4) the plight of female workers; (5) and poverty resulting from illness and injury are challenging governments and social investors to find and develop innovative models that extend the quality and reach of services, improve the lives of women’s lives and reduce poverty. Bringing together approaches to women’s empowerment from the development sector with health sector community based service delivery holds promise for multiple health and social issues. The growth of such investment in the health sector is already resulting in development of innovative models for community-based service delivery. These approaches rely on nurses, midwives and outreach workers – the majority of whom are women. Collaborations between key stakeholders involved in women’s empowerment have developed promising models for service delivery that have the potential to not only expand the reach and quality of services, but also empower female health workers. An excellent example of these promising models are nursing and midwifery enterprises (NMEs), which are community-level health services delivered through provider practices owned and/or operated by nurses and midwives, often working in collaboration with community health workers and other predominately female frontline workers. Examples of NMEs can be found in countries across income levels. (6) NMEs have various corporate structures, including both for profit and not-for-profit, and often serve remote or underserved populations. Payment for
services varies, including contracting with governments for service delivery, insurance or self-pay arrangements. NMEs are often organised through cooperatives, networks or franchises, as well as individual, free-standing arrangements. Many NMEs have characteristics that are well aligned with empowerment of women that extend beyond service delivery. (1,7) Among these are opportunities such as ownership of assets; leadership development; education, training and career opportunity; and representation and “voice” in larger community affairs. In 2014, the Institute of Medicine (IOM) convened a Rockefeller Bellagio Center workshop that examined more closely the potential of NMEs to empower women while also strengthening health systems and services. The report of this meeting, Empowering women and strengthening health systems and services through investing in nursing and midwifery enterprise: Lessons from lower income countries, (6) and subsequent forums hosted individually by the IOM, World Bank and IPIHD (International Partnerships in Healthcare Delivery) have advanced further discussion of this topic, while also identifying reduction of poverty associated with ill health and injury as a third potential area for NME impact. Insights from these and other discussions point to important potential for NMEs to accelerate progress toward UHC and the Sustainable Development Goals. In addition, the potential for NMEs to serve as “hubs” for training, supervision, career development, and collaboration with Community Health Workers (CHWs) and other frontline health workers was seen as additional means for augmenting their impact on women, health and poverty. Another important dimension of discussions relating to NMEs is the crucial role of governments in creating a context in which NMEs and other innovative approaches to service delivery can help to achieve the goals of national health plans. Investment in the health sector is giving rise to services that are not directly controlled by government. Development of appropriate financing, regulation and administrative processes enabling their alignment is crucial not only for NMEs but also for optimizing the positive impact of health innovation.

References
Submission 123

Name/Position: FI Peer, President

Organization: International Society of Radiographers and Radiological Technologists

Organization Type: Health Professions Association and Union

Country: UK

Contribution Type: Opinion

Question Answered: 1, 2, 8

**Contribution**

The radiography task force – looking ahead (an ISRRT perspective)

Solutions are needed in many countries, especially in low-resource settings, to train radiographers in both basic radiography and in the more advanced radiological procedures. The diversity of radiographic practice, together with increasing service demand and the introduction of new technologies dictates that radiographers require constant updated education and training. With this comes the inclusion of new roles/positions to develop individuals to undertake specific tasks and activities that fill the gaps in service delivery due to shortages of trained staff including radiologists. This will not only benefit the patient but also address the need to develop career progression opportunities for the workforce. With new roles comes the need to develop/enhance education and training programs. ‘How can education and training models be transformed to build a fit for purpose health workforce?’

Many middle-to-high income countries have/are employing the 4-tiered education system, for example, United Kingdom where as part of a major modernisation initiative in imaging services improvements in service delivery has been accomplished. The levels go from basic radiography to post graduate education. This system could address the needs in low-to-middle-resource countries.

1. Assistant Radiographer: An Assistant practitioner performs protocol-limited clinical tasks usually under the direction and supervision of registered practitioner or could work unsupervised by defining the scope of practice.

2. Radiographer: A practitioner autonomously performs a wide-ranging and complex clinical role; is accountable for his/her own actions and for the actions of those they supervise.

3. Advanced Radiographer: An advanced practitioner, autonomous clinical practice, defines the scope of practices of others and continuously develops clinical practices within a defined field.

4. Consultant Radiographer/Radiologic Assistant: A consultant practitioner provides clinical leadership within a specialisation, bringing strategic direction, innovation and influence through practice, research and education.

The advantage of this system allows for entry level Radiographers directly from school to have a qualification within a short period of training of approximately 2 years; and for those Radiographers wishing to continue training an opportunity for career progression to the position of Radiographer. It also addresses the shortage of Radiologists in many countries where the Advanced and Consultant Radiographers assisting with reporting on images, and other high level tasks.

The recent combination of imaging modalities in hybrid systems, e.g., PET with CT...
calls for additional training. Many basic and some post graduate courses are also offered by the International Atomic Energy Agencies (IAEA), for example, PET-CT to address this need. What are the conditions needed for investment in employment in the health and social sector to achieve Universal Health Coverage and produce inclusive economic growth, particularly for women and youth?

According to the Bureau of Labour Statistics, the employment of a radiographer is projected to grow 9 percent from 2014 to 2024, faster than the average for all occupations. As the population grows older, there will be an increase in medical conditions that require imaging as a tool for making diagnoses. In order to meet the sustainable goals set with specific emphasis on 80% technology by 2025 a clear emphasis needs to be put on Education and specialisation for high school student. Learners considering a career as a professional in Radiography need base level education in biology, chemistry, math and physics. In low-to-middle-income countries a successful completion of a certificate program in Radiography may be sufficient but most countries have at least a community college or technical school with a two year associate degree for entry level.

‘What are innovative ways of effectively and efficiently financing health workforce investments towards achieving the Sustainable Development Goals?’

In the field of radiography the development and implementation of coordinated efforts by the health, education, labour and human resources sectors within governments is needed. Governmental policies to contribute to the effort but addition the private sector also need to contribute to bring success to the sustainable development goals.In relations to the private sector to sustain and create the workforce needed, one has to create global change by thinking big and outside the traditional learning environments. One effective way to finance health workforce is to use innovative global learning (distance learning) with already established programs for teaching basic information for radiologic programs and speciality training on specific subjects or skill sets needed in the radiographic profession. It may be effective to use foundations that are already set up and direct some of this foundation. This may be achieved through a tertiary course that is already established or through a professional organisation that may also have education modules that can be used to train Radiographers and prepare the workforce needed for the future. This will decrease the overall cost for education in the profession and help achieve sustainable development goals. Also by working with professional societies many distance learning education programs are available to elevate health care workers in specific areas of practice.

‘How can education and training models be transformed to build a fit for purpose health workforce?’


‘What are the conditions needed for investment in employment in the health and social sector to achieve Universal Health Coverage and produce inclusive economic growth, particularly for women and youth?’
‘What are innovative ways of effectively and efficiently financing health workforce investments towards achieving the Sustainable Development Goals?’
[21] Top Radiologic Technology School online, galore, (Radiology, Ultrasound and anatomic imaging programs.
High level Commission on Health Employment and Economic Growth. This projected Study is both timely and vital for future Workforce planning and Social solidarity in Global Community. If it succeeds in addressing the inequities in Health Provision in lower and middle income regions, that will be transformational. Already we are experiencing shortages in many medical disciplines and personnel. In the Global market, systems paying the highest salaries are denuding the poorer regions of their Trained Medical Professionals. Allied to that cultural norms are militating against evidence based Clinical Practices in Medicine. This is, no doubt, demands a multisectoral response from the World Community, whether or not the generosity of Spirit is harnessed to effect a fundamental shift from Greed to Service remains to be seen. Moral Imperative, the acceptance of first principles as starting point would seem to be essential.

The Human Person and this includes pre-born’s are respected as the unique and unrepeatable creation and deserve the respect of the Sons and Daughters of God. This of course means that Global resources are shared with due regard to equity. It supposes too a respect for environment and pollution reduction. In many ways it is about giving expression to the idealism inherent in the Human person with the challenge of replicating it in Government and administrative action plans. Standards, Assessment, and baseline evaluation to agree minimum standards of Health Care Provision will be needed with commitment to adhere to and not fall below the set Standard. Empowerment of the people by way of training and education to fulfil the needs of the local Health System will be needed with the resources to make it happen. Self sufficiency in personnel provision should be the aim. Non Governmental Organisations provide a valuable Resource for Health Care Provision. CICIAMS------can offer example of how NGO’s can contribute to improving Health Status in poorer areas, Zambia. Provision of services in maternal and Child Care to vulnerable group People in Chazanga Compound, Lusaka, Zambia. Swaziland Catholic Nurses Guild, Manages St Teresa’s Clinic providing range of services to Manzini Community Swaziland. These services are working with extreme commitment from our members but would benefit from support from Formal Structures by way of collaboration and financial support.

Above all it is recognising the need and responding within competence to it. We wish a fruitful response to the work of the Commission. Mary Dolan, CICIAMS,

References

In Ethiopia, gender inequalities result in low participation and success of females in education. Based on student enrollment data from 20 universities and 22 regional health science colleges in 2012, 29% of university health science program students and 63% of vocational program students were female. Of students enrolled in midwifery, 38% are female at universities, 86% are female at regional health science colleges. In nursing, radiography and biomedical engineering, the percentage of females ranges from 24% to 41%. The few women that join higher institutions generally have lower academic performance and higher forced dismissal than males. Gender barriers include: poor academic performance, pregnancy, adjustment challenges, lack of orientation, low self-confidence, and financial constraints. Recent studies conducted at Jimma and Hawassa Universities also found high levels of gender-based violence that create an unfavorable learning environment particularly for female students. The Government has implemented concerted affirmative action in favor of females yet the gender gap in education prevails at all levels of the system.

Jhpiego, through the USAID-funded Strengthening Human Resources for Health Project, is working to reduce gender disparity in midwifery pre-service education and ultimately increase availability of female health professionals in Ethiopia. The project interventions are focused on retention of female students in the first school year where typically the majority of female students’ attrition occurs. Retention is a complex issue involving many different factors. Students’ intervention programs had significant effects on retention and college cumulative GPA, and worked better for the first year.

To date, the HRH Project has supported 43 health teaching institutions to strengthen exiting and establish new gender offices; train 93 gender focal persons to conduct life skills training to 1315 female students; provide a welcoming orientation and academic counselling services to 1451 female students; and support female students to adapt to college life. The project also supported gender offices to recognize best-performing female students, establish sexual harassment policies, and provide financial assistance for economically challenged to 282 female students in need.

Case study documentation has found that gender offices provide a space where female students receive mentorship and social/financial support, thereby minimizing dropout rates and improving academic performance. The project has contributed to the successful graduation of an additional 8,301 midwives (68% female), 10,626 health extension workers (96% female), 617 anesthetists (29%
female) and 624 emergency medical biomedical technicians (12% female).

References
http://www.schoolsgalore.com/articles/directories/distance-learning-online-schools/radiologic_technology_online_schools.html
In order to achieve universal health coverage equitably and sustainably health systems must be based on strong primary health care. In order to achieve strong primary health care a well-trained and motivated primary care workforce is fundamental. This includes family physicians and family practice teams. The 2009 World Health Assembly resolution 62.12 on ‘Primary health care, including health system strengthening’ urged Member States: "To train and retain adequate numbers of health workers, with appropriate skill mix, including primary care nurses, midwives, allied health professionals and family physicians, able to work in a multidisciplinary context, in cooperation with nonprofessional community health workers in order to respond effectively to people’s health needs."

Despite this call, greater efforts are needed to strengthen the primary care workforce. In particular it is necessary to train and retain medical graduates as family physicians. The increasing global burden of chronic diseases and multimorbidity, alongside the pressing need to ensure a strong primary care workforce in the face of communicable disease outbreaks, makes strengthening family practice a priority in low, middle and high-income countries alike. Family doctors/physicians, also known as general practitioners in some countries, are medical specialists who provide comprehensive care to individuals and families of all ages through an approach which integrates biomedical, behavioural and social sciences. Family practice, known as general practice in some countries, is a form of health care services provided by family physicians and often supported by other health workers. It is typically characterised by first contact, comprehensive, continuous, coordinated, collaborative, personal, family and community oriented care. It is a key component of high quality primary care which can deliver preventive, promotive, acute, chronic, rehabilitative and palliative care. In order to respond effectively to people’s health needs family doctors and their family practice teams (e.g. nurses, community health workers, midwives) need to be well integrated to the wider health system. However in many countries this is not the case. Moreover the working conditions and career prospects of family physicians, in particular in rural and other under-resourced settings are unattractive compared to secondary care based specialisation or to working independently of the public health system. The pull of medical graduates towards secondary care is compounded by the fact that many undergraduate programmes lack community-based training and primary care role models for students to identify with and aspire towards. Furthermore in many settings there are limited or no opportunities to undertake formal community-based postgraduate specialist training in family medicine in order for health professionals to develop specialised person-centred competencies in primary care. Family physicians play a key role in the training, supervision and coordination of the primary care workforce. Their
contribution is essential to the delivery of high quality and comprehensive primary care. However, whilst the WHO reports on physicians/1000 population, there is a lack of data globally on the number of physicians trained in family medicine and where they are working. Moreover existing classification systems have problems: The International Labour Organization’s (ILO) International Standard Classification of Occupations (ISCO) does not distinguish between doctors who have completed a formal postgraduate specialisation in family medicine / general practice and all other doctors without a specialisation. The OECD’s classification of ‘General Medical Practitioners’ include medical interns and residents who have completed a basic medical university education and are undertaking postgraduate clinical training even if they have not chosen their area of specialisation yet. The OECD’s classification of ‘General Practitioners’ includes doctors who hold a degree in medicine and are primarily engaged in the independent practice of general medicine – not necessarily primary care nor family medicine. Without adequate classification systems and accurate data it is impossible to measure progress globally. Bearing the challenges outlined above in mind we ask that the Commission considers the following recommendations: 1. Governments should measure what percentage of Total Health Expenditure is spent on primary care including family practice. 2. Adequate classification systems should be developed to enable governments to measure what percentage of their medical workforce is trained for and works in primary care. In particular what percentage of medical graduates specialises in family medicine and work in family practice. 3. National policy should recognise the need to invest in the development of multidisciplinary family practice teams which include family physicians. 4. National policy should recognise family medicine as a medical specialty and emphasise the fundamental role of family medicine in health systems strengthening and in achieving universal health coverage. 5. Every medical school in the world should have an academic department of family medicine / general practice (1). 6. Every medical student in the world should experience family medicine / general practice as early as possible and as often as possible in their training (1). 7. Formal postgraduate training in family medicine leading to specialist recognition as a family doctor should be available and accessible to all medical graduates. 8. An organisation of family doctors should exist in every country to work with the government to develop and support family practice standards and education. 9. Opportunities to upskill any existing unspecialised general practitioner workforce in order to demonstrate competency and attain specialist recognition should be made available, for example through further training, assessment and/or certification. 10. Global policy should encourage national governments and international donors to invest in strengthening primary care through family practice, for example with targets regarding the percentage of funds that should be utilised for this purpose.

Resources Recent work by WHO EMRO and PAHO has led the way in the development of regional strategies to work towards strengthening family medicine within the context of achieving universal health coverage (3-5). Publications including The Contribution of Family Medicine to Improving Health Systems (6), Rural Medical Education Guidebook (7), Family Doctors in the Field (8) and Integrating Mental Health into Primary Care (9) provide a global
perspective on the role of family medicine in health systems. In addition there is significant work by the World Organization of Family Doctors (WONCA) on a range of issues relevant to the human resources for health agenda, including topics such as ethical international recruitment, rural workforce and gender equity (10). We recommend the use of these resources as well as previous WHO work in the area of primary care and family medicine (11) to inform the Commission.

References

During the past decades, several middle-income countries such as China and India have experienced rapid growth in its economic output, and witnessed a rapid change in its demographic structure. As a result, the demand for health care has increased significantly over the past decades, which in turn has increased the derived demand for the services of physicians and nurses. By contrast, the increase in the labor and capital inputs for health care, such as the number of health care professionals or the number of hospital beds per 1,000 population, has been relatively moderate during the same period. As the growth in the supply of health care professionals failed to match an increasing demand and as the prices of these health care inputs were not allowed to adjust, many countries faces a situation of excess demand for both physicians and nurses. In addition, there is also substantial variation in the density of health care resources within regions and countries, usually referred to as maldistribution. Despite the dynamic changes in the geographical distribution of health care resources, the maldistribution is shown to persist in both low-income countries and high-income countries. Therefore, it is important to explore whether the extent of the geographic maldistribution will get better or get worse in the dynamic process of income increase. That is, will economic growth in a country lead to convergence (or divergence) in the geographic distribution of health care resources? I and my coauthor have published two papers to investigate these two issues and we think our previous research may provide valuable information for future research in this line. Here we summarized the major policy implications of our research. Our first paper investigates the relative effectiveness of changing wages versus shifting the supply curve in reducing the excess demand for health care professionals in China. Given the recent pro-market reform initiatives, the self-employed medical workers are likely to take an increasing share in China’s health care manpower, thus the need for more doctors can be reduced by payment reforms among this group to make the existing doctors work longer hours. This is because the alternative capacity-building policies that seek to shift the supply curve take a substantially longer time than the policy of wage adjustment, and the payoffs from expanding the medical education system will be greatly reduced if the expected wage payments are inadequate to keep health care professionals practicing. On the other hand, since the hospital employees are paid government-controlled wages with little variation in marginal income, it is not surprising that their labor supply does not respond to wage changes. However, our findings also suggest that private institutions in this regulated sector have been quite effective...
in promoting the work efforts of the employed medical labor force, possibly by
performance-based payment schemes. This implies that another potentially
effective policy to solve the excess demand issue is to increase the proportion of
private hospitals in China’s health care delivery system, and to promote the
incentive-compatible compensation standards in the regulated public hospital
sector. The introduced market mechanisms will allow better substitution
possibilities in health care delivery, reflecting the relative availability of factors of
production and providing more options for eliminating the excess demand for
health care services. In the second paper, we find that the convergence of health
care resources is a long-run phenomenon and hence it takes time for the
inequality mitigating effect to occur. As expected, in the short run as shown in
several published studies, the economic growth in China has been accompanied
by an increase in inequality in many economic and social dimensions, including
health. In the long run, however, our findings provide much hope for China in that
the current trend may be reversed, i.e. the economic growth can be beneficial to
the reduction in health inequality through the converging process of health care
resources across regions. As mentioned, China imposes several regulation on the
health care sector, including setting a regulated wage for health care
professionals and restricting the number of medical schools and number of
enrolled students. Such regulations may deter the transmission of market signals
to the health care sector and hence reduce the convergence rate of health care
resources across regions. Thus, our empirical findings also suggests that de-
regulating the health care sector in China is beneficial to increase the
convergence rate of health care resource across regions, which in turn further
contributes to the decrease in health inequality across regions.

References

In our Horizon 2035 work we identified the most important influences on the whole workforce system – i.e. potential futures that might unfold and how these influences plausibly combine together to create scenarios. These scenarios highlight the risk of action/non-action as well as the influence of key factors. We did this by collaborating with sector experts and stakeholders to prioritise the 29 most important system factors and then considering the direction they might take over a 20 year period. These outcomes were combined to create these 6 scenarios. Involving sector experts and stakeholders from across the health, social care and public health sectors. The four scenario dimensions chosen from the 29 most important factors by the participants were: (1) the economy, (2) technology level, (3) workforce flexibility, and (4) self care. Six scenarios were constructed using different, plausible directions and combinations of the four dimensions and these configurations are shown in infographics at the link below. These scenarios and their narratives are owned by the stakeholders who attended on the day. They are expressed in their own terms and we are currently considering the implications of these futures. Common workforce themes emerging from the scenarios include modifying skill mixes to respond to these futures, changing responsibilities around demand, and the changing role of organisations and people across this system and the sectors within. These scenarios are part of a larger piece of work to stimulate multiple futures in the English health and care system using a wider definition of workforce that include informal and formal healthcare, social care, public health and general population providing ‘wellbeing’ skills. This report highlighted interim findings from Horizon 2035, a key piece of work to help consider how a series of challenges and opportunities may combine in the future and impact the health, public health and social care workforce.

These reports presents preliminary findings of this research programme as follows:

1. Based on our current understanding, we are projecting that demand for health and care skills could grow more than twice as fast as overall population growth by 2035.

2. Much of this growth is driven by increasing healthcare and support demands associated with long term conditions. This relates both to the ageing population and a projected increase in prevalence across age groups.

3. The initial results also suggest that the future profile of demand may be profoundly different to the picture of demand today. For example, growth in demand for lower ‘levels’ of skill – such as those associated with unpaid care, support carers and NHS bands 1-4 - are projected to substantially outstrip growth in demand for higher skill levels associated with medical and dental professionals.
4. Quantifying and projecting the whole health, social care and public health system in terms of the component workforce skills can reveal new insights for workforce planning. These insights can surmount notions of workforces and sectors and can help to align the skill mix of the future with the case mix of the future.


References
Within the EU Joint Action on Health Workforce Planning and Forecasting (www.healthworkforce.eu) the report ‘Future skills and competences of the health workforce in Europe’ (Fellows and Edwards, 2016) describes the work of horizon scanning for the Joint Action which has carried out research into the driving forces influencing the future skills and competences of the health workforce in the European Union out to 2035. The 4 policy briefs and the accompanying main report are aimed at policy makers and workforce planners across Europe to share and better understand the driving forces, their skills implications and to argue for increased use of approaches that can consider multiple workforces and futures as part of health systems and workforce planning. This work also describes the education and training as well as workforce planning implications.

References

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**Contribution**

It is recommended that the current list of excluded countries, which is now some 12 years old, be reviewed and a process established by which countries can be added or removed from the list as and when circumstances dictate. This would assist with dealing with changed circumstances in a much more timely and consistent process than is currently the case.

**References**

We would draw your attention to the following publications that might be of use and interest to the commission: The technology horizon: Preliminary review on technologies impacting the future health and social care workforce.

This paper considers five types of technology: (1) therapeutic technology – technologies used in the treatment of disease and injury, including pharmacological, surgical and psychological therapies (2) diagnostic technology – technologies for identifying diseases and other conditions, (3) enabling technology – technologies that mitigate the impact of disease or disability, (4) preventive technology – technologies that reduce the risk or severity of illness and injury, (5) organisational technology – technologies supporting alternative health and social care delivery configurations and organisational design.

This report has been prepared in conjunction with the University of Manchester, a partner of the CfWI horizon scanning programme. It is based on simple interpretation and extrapolation of trends, and does not intend to predict the future.

This report highlighted interim findings from Horizon 2035, a key piece of work to help consider how a series of challenges and opportunities may combine in the future and impact the health, public health and social care workforce. The report presents preliminary findings of this research programme as follows:

1. Based on our current understanding, we are projecting that demand for health and care skills could grow more than twice as fast as overall population growth by 2035.

2. Much of this growth is driven by increasing healthcare and support demands associated with long term conditions. This relates both to the ageing population and a projected increase in prevalence across age groups.

3. The initial results also suggest that the future profile of demand may be profoundly different to the picture of demand today. For example, growth in demand for lower ‘levels’ of skill – such as those associated with unpaid care, support carers and NHS bands 1-4 - are projected to substantially outstrip growth in demand for higher skill levels associated with medical and dental professionals.

4. Quantifying and projecting the whole health, social care and public health system in terms of the component workforce skills can reveal new insights for workforce planning. These insights can surmount notions of workforces and sectors and can help to align the skill mix of the future with the case mix of the future.

http://www.cfwi.org.uk/publications/horizon-2035-future-demand-for-skills-initial-results

References

‘Future skills and competences of the health workforce in Europe’ (Fellows and Edwards, 2016) http://healthworkforce.eu/work-package-6/ and also attached.

Horizon 2035 - Future demand for skills: initial results

Support for interprofessional education (IPE) from the WHO sprang from its mounting concern regarding the relevance of health professions’ education towards building a stronger healthcare workforce more responsive to population and community needs. An Expert Committee reviewing medical education (WHO, 1973) believed that IPE would improve job satisfaction, increase public appreciation of the health care team and encourage a holistic response to patients’ needs. Its conviction was confirmed by examples of IPE cited in: Algeria, Australia, Canada, Egypt, France, Israel, Mexico, Nepal, Pakistan, the Sudan, Sweden, the United Kingdom (UK) and the United States (US). Each WHO member state was charged with the task of providing interprofessional programmes. The WHO's engagement was renewed when it convened successive study groups (WHO, 1988 & 2010). The more recent, in partnership with the then International Association for Interprofessional Education and Collaborative Practice, published a frame of reference to assist policy makers test the desirability and the feasibility of a package of interprofessional propositions in the context of national and international needs, priorities, resources and opportunities (WHO, 2010). The Health Professions Networks (www.who.int/hrh/professionals/en/) followed up the report as did the Health Professions Global Network (HPGN) which took IPE as one of a series of two-week web-based debates (www.hpgn.org). Most contributions came from developing countries. Participants widely supported the integration of IPE into undergraduate programmes with early exposure linking theory and practice (Wistow, Usher-Patel, Fusco et al., 2010). Further evidence regarding the spread of IPE came from an online global scan conducted by WHO regional staff in association with members of the Study Group. The 396 responses came from the following 41 WHO member states: Armenia, Australia, Bahamas, Belgium, Canada, Cape Verde, the Central African Republic, China, Croatia, Denmark, Djibouti, Egypt, Germany, Ghana, Greece, Guinea, India, Iran, Iraq, Ireland, Japan, Jordan, Malaysia, Malta, Mexico, Moldova, Nepal, Norway, Pakistan, Papua New Guinea, Poland, Portugal, Saudi Arabia, Singapore, South Africa, Sweden, Thailand, the United Arab Emirates, the UK, Uruguay and the US (Rodger & Hoffman, 2010). Reviewing health professions’ education worldwide, the independent Lancet Commission (Frenk, Chen, Bhutta et al., 2010) called for a vision and strategy transcending national borders and professional demarcations. Fragmented and static curricula needed to be updated to equip graduates for...
practice in the 21st century. Learning needed not only be formative and informative but also transformative to develop leadership for change. Seldom had such an authoritative group championed the interprofessional cause with such cogency and conviction. Work nevertheless remained to be done to ground the Commission’s arguments in IPE experience (Thistlethwaite, Barr & Gilbert, 2011). Drawing in its guidelines for health professions education and training on arguments and evidence from the study group and the Lancet Commission, the WHO (2013) reaffirmed the essential tenets of IPE showcased subsequently on the WHO website launched to carry forward developments in transformative education (www.whoeducationguidelines.org/)Systematic evidence (Reeves, Fletcher & Barr et al., 2016) confirms that well conducted IPE not only improves understanding and collaboration between professions but also contributes to the creation of a more flexible workforce responsive to population needs and to the implementation of innovative strategies for service development.

IPE is no panacea to resolve the global workforce crisis in health care but it must have an indispensable place in each and every effective strategy. The World Coordinating Committee (WCC) (www.atbh.org) currently represents networks in Australasia, Canada, Europe, Japan, the Nordic Countries, the UK and the US and has links with developing networks in Africa, Brazil, and the Middle East and with other organisations including Towards Unity for Health. It is dedicated to the improvement of health and healthcare globally, strengthening the workforce and transforming education for the professions through interprofessional learning. Launched in 2013, the WCC promotes IPE through its constituent regional networks, supports the development of new regional networks and steers the biennial series of global All Together Better Health (ATBH) conferences which showcase current examples and evidence of effective interprofessional learning and of interprofessional collaborative practice in health care, and represents the interprofessional movement at international level. It works through its members leading interprofessionally committed research centers, peer reviewed journals and publishing house.

References
In the past centuries, infectious diseases were the major cause of death in low and middle income countries (LMIC). Now a day, people are living longer, but not necessarily with good quality of life. Currently 800 mothers per day die when childbearing, 3000 children less than 5 years old die of birth complications and infectious diseases like diarrhoea and pneumonia every day; however, noncommunicable diseases (NCD) are on the rise, particularly in LMIC. Today, 70% of premature deaths caused by cancer and diabetes are in LMIC (1,2). NCD require appropriate technologies that need to be available to empower the health care worker or community health provider to diagnose early, refer a patient when needed, monitor patients and provide effective treatment and palliative care. As science and technology evolves, medical technologies are being developed by multidisciplinary teams in which usually a biomedical engineer or related professional is involved. Due to the global health emergencies, research and development is now being focused on global health priorities. Biomedical engineers are professionals that study engineering curriculums based in mathematics and physics sciences along with a medical component, including biological systems, medical physiology, pathology, biochemistry. These studies are then applied to the design of medical devices to replace or measure biological functions, or to diagnose or treat disease. These health technologies, specifically medical devices, have to be safe, effective, and of good quality. These devices, when and where available, are intended to support the health care workers, patients and their families in their daily functions. Ten years ago, Biomedical engineering educational facilities were mainly located in high income countries, now a days, 126 countries have some program of biomedical engineering or related fields. In a recent WHO global survey, the total number of biomedical engineers identified was 117,935 in 126 countries, with the lowest densities of biomedical engineers in low- and lower-middle-income countries (3). This emphasizes the need for promotion of educational programs for biomedical engineers in developing health systems. More jobs need to be created in low and middle income countries in the health care sector, both at government level and health facilities, to support the regulation, selection, planning, procurement, supply chain delivery, training, and maintenance of medical technologies, so that the investment is made according to actual needs and so that technologies are used wisely, appropriately and safely by patients and health care workers. Most hospitals organigrams globally do not include a biomedical or clinical engineer in their structure, and pay much money to have external contracts or to replace technology. Most central supply stores in low income countries do not know how and what to procure, as they do not have the technical expertise, and in consequence, consumables or spare parts, are not adequately procured for the equipment installed, which causes a lack of possibilities to use the devices, even if 
available. Most clinical engineers in hospitals in LMIC are so busy in their daily work, trying to find solutions to the high demand of requests, that they do not take time to conduct studies or publish papers in peer reviewed journals, therefore mostly anecdotal records or interviews are instead encountered. The first baseline global study to know the status of biomedical engineers worldwide is being conducted by WHO along with professional organizations in order to request to ILO a specific classification of biomedical engineers, so that it would be possible to have statistical data. Biomedical engineers are most required in countries where there is almost no commercial distribution of medical equipment manufacturers, and so the situation is much more complex as spare parts or consumables might take 3 to 6 months to arrive provided a procurement process would be in place, as transportation, customs, taxes, local supply chain are a major hindrance. Therefore, in conclusion, it is noted that complex diseases are on the rise in low resource settings, and while science and technology is advancing, medical technology is complex to regulate, to select, to use, can be very expensive, access is very complex, and special professionals are needed to support its availability, quality, and safe and appropriate use. This requires acceptance that biomedical engineers are an essential part of the health sector workforce and must be recognized and integrated in health care systems.

References
The European Union updated the (EU) directive on professional qualifications thus has important implications for health professions. When discussing how to find basic information on key issues such as licensing and registration of doctors in different countries, we might face difficulties. A survey was conducted in 2011 among national experts in 14 EU member states, supplemented by literature and independent expert review. The questionnaire covered five components of licensing and registration: (1) definitions, (2) regulatory basis, (3) governance, (4) the process of registration and (5) flow and quantity of applications. We identify seven areas of concern: (1) the meaning of terminology, which is inconsistent; (2) the role of language assessments and the responsibility for them; (3) whether approval to practise should be lifelong or time limited, subject to periodic assessment; (4) the need for improved systems to identify those deemed no longer fit to practise in one member state; (5) the complexity of processes for graduates from non-EU/European Economic Area (EAA) countries; (6) public access to registers; and (7) transparency of systems of governance. The systems of licensing and registration of doctors in Europe have developed within specific national contexts and vary widely. This creates inevitable problems in the context of free movement of professionals and increasing mobility. Monitoring new registrations and the number of registered professionals, requirements, recognition etc. are important and assuring professional standards are tools for policy-makers for quality assurance and health workforce planning in nowadays increased mobility flow. After all, ensuring good medical practice and good quality of healthcare and medical professionals, so as patient safety are crucial in every European country. The general interest of health workforce planning is getting more significance. Thus, registration and licensing issue might be one tool for supporting long-term workforce planning, namely, facilitating legislation by making easy to get registered and licensed for doctors in another EU country, and providing simplicity and transparency of these processes for all EU citizens. For this reason, data collection on new registration of foreign professionals should be fostered, in order to observe more precise numbers of mobile doctors and monitor sustainability of European health systems.

References

FEASIBILITY STUDY ON A SUSTAINABLE EUROPEAN DATA COLLECTION SYSTEM

The Health PROMEThEUS research project dealt with the health professional mobility within the European Union. Based on the research results we concluded the necessity of European Health Workforce Mobility Data Collection System: The mobility of health professionals is of crucial importance from the point of view of the sustainability of health care systems in member states of the EU. One of the recommendations of the Green Paper on the migration of the health workforce is to establish an EU-wide data collection system to monitor flow of health workers. Monitoring and analysis of the changes and trends can only be based on valid, reliable and comparable data. One of the objectives of the Prometheus project was to collect valid and reliable data on health professionals’ migration particularly of European countries, but also of countries outside Europe. International data collection has never been done before. Comparative analysis can be carried out using a set of standardized health workforce indicators. In the Prometheus project we have found that there are many problems and difficulties regarding the availability of data, as well as the lack of a common terminology, classification and standard indicators. In several countries there is no data collection or few data on health professionals’ background, including foreign status. Based on the experiences the following steps need to be taken: identification of the circle of stakeholders, agreement on a standardized set of definitions of health professionals, reviewing the acts, collection of standardized migration data in every country, collection of stock and flow data in the European Union (which is currently lacking), annual data collection, presentation of the data in a digital mapping application. The financing of a migration observatory could be based on the contribution of wealthier, mainly recipient countries.

References

Analysis of a survey on young doctors' willingness to work in rural Hungary

Background
The severe shortage of qualified healthcare staff in Hungary cannot be quickly or easily overcome. There is not only a lack of human resources for health, but significant inequalities are widespread, including in geographical distribution. This disparity results in severe problems regarding access to and performance of health care services. In this context, this report, based on research carried out in 2008, deals with a particularly relevant matter: the willingness of young doctors to work outside Budapest (the capital of Hungary).

Methods
We conducted a survey with voluntary questionnaires and focus group interviews at each of the four Hungarian medical schools, concerning career plans and related incentives among young medical doctors. In all, 524 residents responded to the question concerning their willingness to work in rural areas, and there were seven focus group interviews, with 3-7 participants in each group. The number of residents' places in Hungary was 832, 682, and 785 in 2006/2007, 2007/2008, and 2008/2009, respectively.

Results
The majority of those surveyed would like to work in Budapest or a large town. Fewer than 7% were willing to work in a town with less than 50,000 inhabitants. Most young doctors would like to work in a teaching hospital (i.e. an accredited training site for medical students and postgraduate trainees) or a major regional hospital.

Conclusions
The current system of medical training in Hungary tends to produce doctors who want to live in big cities and work in central hospitals. Rural regions and non-in-patient service alternatives seem either not to be targeted or seen as unattractive work places. More doctors would be willing to work in smaller towns and villages if in-hospital training was altered and if doctors were offered adequate incentives as part of a comprehensive human resource strategy (high salaries, high professional standards, good working environment, reasonable workload). If these changes do not occur, the existing geographical and structural imbalances will not be improved.

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