WHO consultation on the transformative scale-up of medical, nursing and midwifery education

First technical reference group meeting: medical education experts
28-29 June 2010
The work on scaling up nursing and medical education is being undertaken in partnership with the US President’s Emergency Plan for AIDS Relief (PEPFAR).
## Contents

Background of the meeting .............................................................. 1  
The objectives of the meeting .......................................................... 2  
Reviewing the evidence ................................................................. 3  
Summary of key points of consensus arising in discussions .............. 9  
Development of formal WHO recommendations ............................. 11  
List of participants ...................................................................... 12  
Additional information ................................................................. 13
Background to the meeting

Low and middle income countries need a large number of new healthcare workers. In addition to other health professionals, many of these countries need more doctors. Closing this supply shortage means educating and deploying more doctors—scaling up medical education. But simply increasing the numbers of doctors is not enough. Reform is also needed to strengthen the impact made by doctors on population health outcomes in the countries where they are educated.

Insufficient collaboration between the health and education sectors as well as weak links between educational institutions and health systems can create a poor match between medical education and the realities of health service delivery. These systemic constraints perpetuate skill flow away from underserved communities that bear the burden of poor health and force institutions to choose between global excellence and local responsiveness in skills and competencies of medical trainees.

If a global scale up of medical education is to ultimately transform population health outcomes then it must increase the quantity, the quality, and relevance of the doctors of the future.

World Health Organization (WHO) and US President’s Emergency Fund for AIDS Relief (PEPFAR), along with other partners, have embarked in a programme of work in support of transformative scale up of health professional education. The goal of the effort is to produce formal WHO policy and technical guidance that will assist countries, development partners, and other stakeholders in efforts to expand their professional workforce of medical doctors, nurses and midwives and improve the alignment between health education and population health needs. The work also aims to strengthen and or develop broad implementation platform to support scale up and evaluation of the guidance.

The effort to develop WHO guidelines represents one component of a broader programme of work led by PEPFAR to increase the production and clinical competence of doctors, nurses, and midwives. The US programme, called the Medical and Nursing Education Partnership Initiative (MEPI and NEPI) will support African medical and nursing educational institutions and universities to introduce innovative approaches to enhance the clinical quality and improve the retention of their graduates in their countries and communities.

The Initiative will support investment in innovative strategies, models and practices that strengthen educational institutions and help expand and retain the workforce. Funding will be made available to a number of medical school in selected African countries, working in partnership with US medical schools and universities and to selected nursing educational institutions in Lesotho, Malawi, and Zambia. The overall goal of the initiative is to develop and strengthen innovative models of medical, nursing and midwifery education to be brought to scale globally.
The objectives of the meeting

An outcome of the collaborative partnership will be the formulation and implementation of formal evidence-based WHO guidelines on scaling up transformative education of doctors, nurses and midwives.

In order to inform the policy development, WHO has commissioned a systematic review of existing evidence, documentation of relevant country experiences, and original research to address the remaining knowledge gaps.

The data generated must be subjected to review and analysis by appropriate peers and stakeholders. To these ends, the WHO-based Secretariat has established a body of experts who can engage with and inform the work on a regular basis. The experts have been invited to form five Reference Groups, each with a special expertise—(1) medical education; (2) nursing and midwifery education; (3) regulatory bodies and professional associations; (4) policy makers; and (5) community.

This meeting represented the first consultation with the group of medical education experts. The group comprised individuals with knowledge and experience relevant to the transformative scale up of medical education. The experts will have a vital role to play in developing the research methodology, contributing to the generation and assessment of the evidence, and reviewing drafts of the resulting recommendations.

The vision

All partners are forming a shared vision of transformative scale up of medical education. Each stream of work will contribute to building stronger and more sustainable human resources for health in low- and middle-income countries through:

1. Cooperation and coordination between the education and health sectors
2. Greater alignment between educational institutions and health service delivery systems
3. Political commitment and partnerships to facilitate policy reform at national, regional and local levels
4. Close collaboration with communities
5. Promotion of social accountability in medical education
6. Country ownership of priorities and programming related to medical education
7. Vibrant and sustainable medical education institutions
8. Global excellence coupled with local relevance in medical research and education
9. Faculty of outstanding quality who are motivated and can be retained
10. State of the art and dynamic curricula with population relevance
11. Doctors who are clinically competent and provide the highest quality of care
12. Supportive learning environments including good physical infrastructure
13. Increased enrolment, graduation rates, and improved retention in underserved areas

All for the sake of achieving BETTER POPULATION HEALTH OUTCOMES!
The specific objectives of the first meeting were to: introduce the expert group to the Medical and Nursing Partnership Initiative and the process for development of WHO global recommendations; review some of the early findings that are emerging from the ongoing knowledge gathering effort; and begin to map out a framework for the recommendations through the identification of key areas of intervention.

Reviewing the evidence

A. Examples of successful innovation in countries

Representatives from a diverse group of countries shared experiences to highlight the key elements needed for successful scale up of transformative medical education.

These key elements were: political commitment to support national policy reform; reform of educational institutions; inter-sectoral cooperation; collaboration with the community at various levels of governance; a focus on encouraging social accountability; and improving the match between medical education and population health needs.

1) Brazil demonstrates the importance of mobilizing high level political commitment to support national scale policy reform of medical education.

A significant aspect of Brazil’s policy towards professional health worker education is the integration of the health and education sectors. This relationship has been defined at the highest level of the government: the National Constitution establishes the responsibility of the Ministry of Education for regulating professional education throughout Brazil but also states that the National Health System holds command over the education of health professionals.

Brazil has made a long-term commitment to invest in its national health system with the intention of delivering care that is universal, equitable, and holistic. In keeping with these goals, there has been strong political support for being responsive to population health needs and for placing primary care and family health at the centre of the national health system.

In line with this approach, in 2003 the Ministry of Health implemented an active programme of incentives to try to encourage curricula reform in medical education. The programme now involves 360 colleges covering many different health professions. Grants are provided to support a range of measures leading to revision of curricula and adaptations to health facilities. The programme reaches approximately 100,000 students.

Brazil has progressed from a traditional model of medical education based on hospital-based, teacher-centred learning geared towards curative approaches to complex diseases towards a more responsive model of decentralized, active learning which addresses the social determinants of health, promotion and primary care.

2) Thailand’s process of national level policy reform led to implementation of a nationwide primary health care approach.

During the 1980s and 1990s Thailand embarked on a policy of major rural health infrastructure expansion aimed to extend health services to underserved populations through district level extension of primary health care and human resources for health development.
These efforts have produced a strong public health infrastructure and rapid expansion of the health workforce.

Strategies to increase the numbers of doctors and nurses have included the standardization of curricula across both public and private training institutions and certification by medical and nursing councils. There have also been efforts to match curricula with national health needs although the medical curriculum continues to be defined by international standards. There has been an equal focus on faculty development and production capacities.

Thailand has also placed a strong emphasis on retention strategies. High levels of rural placement have been made possible through a policy of mandatory government bonding of all health graduates. Students are recruited from rural areas, undergo training in the provinces and are often deployed to service in their hometown. These measures, along with other financial and non-financial incentives, have generated a strong commitment to rural service in Thailand.

3) **Sudan** has shown innovative ways for educational institutions deliver training.

The experience of the faculty of medicine at the University of Gezira has changed the notion of medical education in Sudan. Since 1978, Gezira has pioneered the adaptation of medical education towards a community-oriented and community-based approach that aims to contribute to improving population health outcomes. But the path was not easy. In the early days, critics claimed that the new approach taken by Gezira would produce medical assistants instead of doctors and the students went on strike in protest. Now, almost 30 other medical schools have been convinced of the wisdom of the approach and are adapting their own model of medical training inspired by the Gezira experience.

Three aspects of the Gezira model seem to stand out. First, the model focuses on field training within the community. Each student is attached to a particular family for the whole period of their training. They spend time consulting community members to identify priorities around which the student teams then develop responses, seek funding, implement and evaluate. For example, in one village Gezira students built a soap factory which made a significant contribution to tackling scabies which was endemic in the area.

Community involvement extends also to the administration of the training programme through consultation on curricula and in providing living accommodation. Community members are even centrally involved in the selection and recruitment of students.

Second, the model focuses on community health and prevention. Observers have noted that Gezira students are unlike traditional medical students in their mindset. Even the specialists are focused first on prevention and the determinants of health rather than on curative interventions.

Third, the model emphasizes partnership with relevant sectors at every level from students up to ministries. Within the university there is close collaboration with the faculty of economics and agriculture. Externally, Gezira has a strong partnership between the university and the governor. Such cooperation generates strong political commitment and eases the passage of transformative plans and policies.

Postgraduate training is also focused on community health needs and Gezira offers a postgraduate qualification in community medicine with in-service training funded by the state governor. Instead of university hospitals, Gezira has contributed to the development of strong specialist units in general hospitals.
Evaluations show a 70% reduction in maternal and child mortality in Gezira state — proof of the efficacy of the approach.

4) **South Africa** demonstrates the importance of collaboration between an institution and the provincial authorities, and between the institution and the community.

Walter Sisulu Medical School was founded in 1985 specifically to address the need for doctors in underserved rural communities. The principle of the approach is to recruit, train, deploy and retain doctors locally. Achieving these aims has required the close cooperation of the local and regional authorities.

Recruitment from the locality — an area that is socially and economically disadvantaged — has involved a number of challenges. Local government has provided scholarships so that opportunities can be extended to those who are considered to have potential. The need for faculty has been tackled with additional funding provided by the department of health rather than the department of education. Furthermore, more than half of the teaching staff is currently employed by the department of health rather than by the university. Teaching is undertaken as part of their service duty, paid for out of regular service salaries. This model has relied on the goodwill of local government requiring, as it does, the release of service time.

At graduation, most medical students are deployed to posts that have been planned and agreed well in advance by the local department of health. This encourages a commitment to local service and the department of health also provides compensation for rural postings and offers other forms of assistance to help graduates get established in service.

5) **India** showed the need for the social accountability to be at the heart of a transformative approach to medical education.

Over half the medical colleges of India are privately funded and the need for graduates to recoup the investment in their education has a strong influence on medical practice. Christian Medical College (CMC) represents a counterpoint response to this highly profit-driven model of service delivery and medical education.

CMC sets out to identify applicants with a commitment to social accountability. Graduates must agree to work in an area of high need for a minimum of two years upon qualification. The curriculum and training model are also highly community oriented and based on the principles of primary health care.

6) **Pakistan** explored the challenge of linking a global medical education to the public health challenges at home.

In Pakistan, eight common health conditions are responsible for the majority of deaths. However, international standards for medical education demand a curriculum that is not specifically tailored to address these. For example, despite the fact that the burden of maternal and newborn mortality is high in Pakistan, a recent survey found that the country’s doctors were not sufficiently skilled at performing newborn resuscitation.

Moreover, Pakistan’s resources for health have traditionally been invested in tertiary and secondary health care leaving only 15% of funding serving 90% of the population according to 1999 figures. The vast majority of doctors are deployed in a small number of urban areas leaving the majority of the population poorly served.

To address these challenges, Pakistan launched a national programme for family health and primary care in 1994 which produced a significant reallocation of resources towards primary care. Pakistan has also taken a series of measures to ensure that medical education can provide the appropriate skills to address the country’s burden of mortality.
The Aga Khan University is a multi-disciplinary university with a major focus on health. The admissions policy has been to recruit the top 5% of candidates irrespective of their ability to finance their education. While meeting international standards for medical education, the curriculum also includes community health and maternal and child health and the training model includes service among underserved communities such as in urban slums.

Yet, because of the high quality of the graduates produced, 90% migrate to jobs elsewhere, mostly in the USA (with some of this number returning to Pakistan to take up faculty positions).

Reasons for such poor retention rates include the popular belief that training abroad is superior and a mark of achievement. The lure of high-tech training, super-specialization, and the expectation of higher incomes is also strong. There is also a perception the medical training systems of western countries are more merit-based and less open to corruption and poor management.

Clearly, these challenges cannot be overcome by changes to medical education alone. Reform of health systems is also needed.

B. Global Quantitative and Qualitative Data Gathering

The body of research on medical education is growing quickly. Four major research strands and related initiatives relevant to the WHO/PEPFAR effort are nearing publication. Each of these efforts are producing valuable data and learning important lessons which will inform the production of the WHO guidelines.

**Education of Health Professionals for the 21st Century: A Global Independent Commission**

A new commission was launched in January 2010 to recommend instructional and institutional innovations to develop a new generation of health professionals. The commission’s final report will be published in the Lancet in November 2010, timed to coincide with the 100th anniversary of the Flexner Report.

The commission has been landscaping health conditions and surveying medical, nursing and public health schools in all regions of the world. The commission has identified cases of innovation in all regions that could serve to guide and inform reforms of health professional education.

The commission is emphasizing the centrality of the interaction between the education systems, health systems and population needs, demands, provision and supply in relation to the health workforce.

**Sub-Saharan African Medical School Study (SAMSS Project)**

The SAMSS Project has undertaken the first-ever systematic and comprehensive documentation of the status and trends of capacity building and retention efforts of medical education throughout sub-Saharan Africa.

The study included a survey which has revealed that a total of more than 140 medical schools exist across 40 countries in sub-Saharan Africa — a significant increase on the 100 schools that had previously been documented. Through a literature review, key informant interviews, surveys and structured site visits to 10 medical schools, the study has produced evidence of core characteristics covering faculty, tuition fees, postgraduate activities, and institutional structure.
The new evidence supports a series of findings that can be summarized as follows:

- Many countries are prioritizing the scale up of medical education as part of overall health sector strengthening.
- Physician “brain drain” is a special problem for medical education.
- Accreditation and quality measurement are important developments for standardizing medical education and physician capabilities.
- The status of the country’s health system affects medical education and physician retention.
- Coordination among ministries of education and ministries of health improves medical schools’ ability to increase health workforce capacity.
- Shortages of medical school faculty are endemic and problematic.
- Problems with infrastructure for medical education are ubiquitous and limiting.
- Educational planning that focuses on national health needs is improving the ability of medical graduates to meet those needs.
- International partnerships are an important asset for many medical schools.
- Variability in secondary school quality creates challenges in medical school admissions.
- Impressive curricular innovations are occurring in many schools.
- Beyond the creation of new knowledge, research is an important instrument for medical school faculty development, retention, and infrastructure strengthening.
- Private medical schools hold promise for adding to physician capacity development.
- Post-graduate medical education is an important element of a national health system development strategy.

**Ethiopia’s General Practitioners Competency Assessment Survey**

Ethiopia is engaged in an ambitious plan to train 13,000 new medical students by 2013. This expansion has been made possible as a result of some key changes to traditional medical education.

In order to inform this effort, the Ministry of Health and the Ministry of Education have undertaken a General Practitioners Competency Assessment Survey. The objectives of the study are to assess the competency of general practitioners, to understand the strength and weaknesses of the current curriculum, and to learn lessons that can inform the modification of the current curriculum.

Data were collected in all 11 regions from 221 general practitioners and 161 medical directors, department heads and specialists. 61 focus group discussions also contributed data.

The key finding emerging from this research has been to shine a spotlight on the mismatch between the skills and competencies of graduates and the epidemiological profile of Ethiopia’s population. Both graduates and their supervisors shared the view that their education often failed to address the realities that graduates would face when practicing medicine in the community. According to graduates surveyed, the most important aspects of their medical curriculum in relation to their current job were the clinical year courses with practical sessions on patient care that emphasized bedside teaching, and management sessions. Practitioners suggested that a rural and community component with an attachment also should be emphasized, that preclinical courses should be strengthened with an evidence based approach, and that there should be more emphasis on emergency surgical procedure skills, emergency obstetric procedure skills, emergency life saving procedures, information technology, leadership, management and more emphasis on public health.
Global Consensus on Social Accountability in Medical Education

The Global Consensus on Social Accountability in Medical Education is a network dedicated to promoting social accountability in medical education.

At the heart of the consensus lies the principle that social accountability in medicine should strengthen the link between production of graduates and their working environment and ensure that global principles can accommodate context specificity.

The network has recently undertaken a Delphi Survey. The overwhelming response was that stakeholders are willing to embrace the concept of socially accountable medicine. Building on this response, a conference in South Africa in October will aim to adopt a global consensus statement and generate commitments to act. The preliminary results of the survey also find respondents place importance on a number of principles including: anticipation of society’s health needs; partnerships between medical schools and health systems and stakeholders; recognition of the changing and future roles of doctors and health professionals; the need for outcome-based educational strategies; the importance of governance of medical schools; the need for scope of standards, quality improvement and national mechanisms for accreditation; and recognition of the central role of society.
Summary of key points of consensus arising in discussions

Seeking synergy between health and education
Transformative scale up of medical education will require redefinition of the relationship between the education and health sectors. Close cooperation and joint planning between the different sectors will ensure a good match between the production of doctors and national health workforce plans. Such a match—one that links supply and demand—is essential to ensure efficient and effective delivery of health services for all people, including marginalized communities. Other sectors such as finance and labour must also be included in joint planning processes.

Linking educational institutions with health systems
At the heart of transformative scale up of medical education lies a commitment to ensure that doctors are accountable to the communities that they serve and have both the will and the appropriate competencies to address the specific health needs of those populations. Strong links between those institutions that are responsible for the production of doctors and the health systems for which they will be deployed can help to engrain a culture of social accountability in medical education.

A systems approach is important
Transformative scale up of medical education can function as a health systems strengthening process, engaged in dynamic interaction with the country health system to influence the circumstances in which graduates will practice and where doctors themselves can operate as agents for change.

Technical excellence and social accountability should not be contradictory
Achieving an appropriate balance between global excellence and local relevance is a big challenge. In the past, some critics have argued that placing an emphasis on social accountability in medical education can undermine the technical excellence of graduates. Transformative scale up of medical education does not exclude investment in centres of global excellence and world class research. But positive impact on population health outcomes must be afforded greater value among the criteria for measuring excellence.

Pay now or pay more later
Innovative approaches to medical education are likely to be expensive on a short term. New strategies, such as community based rather than institutionally based education, or bridge programmes to ease the recruitment of students from areas with poor educational opportunities, will require significant initial investment. It is therefore essential to build the case that such investment will reap significant longer-term savings in terms of population health outcomes and economic development. Investment of this kind will only be possible if there is political commitment at the highest levels, including the support of global development partners.

Retention is a key outcome of transformative scale up of medical education
The challenge of retaining qualified graduates is at the heart of the health workforce crisis in many countries. Transformative scale up of medical education, with its emphasis on inter-sectoral cooperation, social accountability and innovative approaches to recruitment and training, has retention as a key objective.
Working in teams is a key component of good health service delivery

Health services are often delivered by teams of health workers with a range of responsibilities and related competencies. Efficient and effective distribution of tasks across the health workforce will support good health service provision. For example, it is now widely accepted that community health workers can deliver a wide range of health services safely and cost-effectively at the community level. It is also known, however, that the successful and sustainable deployment of community health workers is only possible if they are well-organised as part of teams with access to functioning referral systems that link them to qualified doctors and nurses and midwives.

Transformation of medical education is urgent

In many countries, efforts to scale up the production of professional health workers are under way. Technical and policy guidance is urgently needed to support and inform these efforts. Funding for the study and reform of medical education has generally been low and the new data under discussion at this meeting are timely. The Medical and Nursing Education Partnership Initiative is moving quickly to implement a number of interventions including support to a selection of institutions in targeted countries to develop and expand innovative models of medical education. The WHO recommendations on increasing access to health workers in remote and rural areas through improved retention are available for immediate use and include a number of recommendations on health worker education which are relevant.

Work on nursing education and medical education must progress hand in hand

Efforts will be made to ensure that the work of the nursing education experts, which has so far progressed in parallel, should combine in shared dialogue with the medical expert group.

Building a regional balance in the evidence base

The data currently available provide a rich and growing source of knowledge on medical education in the Africa region. Data of equivalent quality are limited from other regions and studies similar to the SAMSS Project covering other regions would be immensely valuable.

Effort must also be made to seek out non-English publications. Resources limitations often lead to reliance on English language publications and exclude other linguistic traditions which often have different systems that should be considered.

Regional as well as global consultation

Regional consultations will be an important element of the work and should aim to include relevant representation from other sectors such as finance and labour. If resources prevent the organisation of sufficient regional meetings, online communications or satellite meetings attached to other regional events should be explored.

Building a platform for implementation

A key objective of the process of guideline development is to create partnerships that can provide a platform for implementation of the recommendations and, through broad advocacy, to promote a supportive environment for reform.
Development of formal WHO recommendations

Building the evidence base

WHO recommendations must be evidence based. It follows therefore that the process begins with a programme of research designed to ensure that the evidence is sufficiently robust. The research work around the transformative scale up of medical education draws from a number of different studies and utilizes a variety of methodologies.

The first phase, of which the meeting of medical education experts represented an important part, involves consultation among countries and among other experts and stakeholders to identify the challenges and define the key areas for intervention. Informing this work are the findings of a systematic literature review which is being undertaken by George Washington University. Consequence mapping of the scale up of medical and nursing education in at least two countries in Africa will be undertaken by the ICN and IAPAC. These information sources are to be complimented by data emerging through countrywide assessments of medical and nursing education, and a number of costing studies, which are being undertaken in selected countries as part of the Medical and Nursing Education Partnership Initiative.

These rich and varied information sources, analysed within a systematic framework, are likely to reveal remaining knowledge gaps. Further research work will then be designed, as necessary, to address any such gaps through selected country studies and key informant interviews.

Work on the literature review is already progressing fast. The search strategy on medical education has produced a total of 3,846 results from electronic databases (narrowed to 835) and 454 results from the grey literature (narrowed to 55). For nursing education, 2,072 results of the electronic databases search and 131 results from the grey literature search have been narrowed to 1,332.

These results have already been organised into thematic groupings and will be analysed and presented to the reference groups in due course.

Refining the research agenda

The process for development of formal WHO global recommendations revolves around the identification of a clear set of questions that the recommendations and guidelines will seek to address through the process of evidence gathering and consultation. Working group discussions focused on the preparation of a series of key questions that will guide the research and policy development work over the coming months.

Feedback from the working groups helped to identify the key areas for intervention and to define a framework for research and recommendations that will cover:

- The importance of a context-specific approach to health professional education
- A focus on population health outcomes
- Alignment between education and the national health systems strengthening agenda
- Synergy between education, research and service delivery
- Policy reforms and transformation of educational institutions
• Revision of curricula and educational methodology, faculty and student selection, accreditation and teaching sites
• Strengthening research
• Continuing education and post-graduate education
• Informing and influencing the recruitment and deployment of new graduates

The detailed work of the different groups has been recorded by the Secretariat. Work will now commence, with the support of a methodologist, to draft and refine a comprehensive set of research questions.

The drafting of questions for research purposes, and the subsequent development of recommendations, is a dynamic and evolving process which will be open to refinement and review. Reaching agreement from the start on the key areas of interest will serve to ensure an efficient process of research that can support the emerging recommendations with robust and relevant evidence.

WHO policy guidelines are developed in response to demand from countries, and other stakeholders, for evidence-based support. The process of developing recommendations engages countries in a process of dialogue and helps to build a broad platform for implementation of needed reforms at the country and global levels.

In the months ahead the evidence gathering will continue and the consultation process will broaden to include the expert groups for nursing and midwifery education, regulatory bodies and professional associations, policy makers, and community.

Presentations

All the presentations that were made at the consultation are available in electronic format at:

http://www.who.int/hrh/education/guidelines_medical

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Additional information


The Medical Education Partnership Initiative http://grants.nih.gov/grants-guide/rfa-files/RFA-TW-10-008.html

The Sub- Saharan medical school study http://www.samss.org/

Social Accountability in Medical Education. An initiative led by the University of British Columbia and Walter Sisulu University with technical support from the World Health Organization. For more information, please contact Ms Rebecca Bailey (baileyr@who.int) or Dr Robert Woollard (woollard@familymed.ubc.ca).


Avicenna Directories http://avicenna.ku.dk/

WHO global recommendations for the retention of health workers http://www.who.int/hrh/retention/guidelines/en/index.html

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