

scaling up
nursing & medical
education

Report on the WHO/PEPFAR
planning meeting on scaling up
nursing and medical education
Geneva, 13-14 October 2009



**World Health
Organization**



PEPFAR
U.S. President's Emergency Plan for AIDS Relief

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).

Background to the planning meeting

The problem

It is widely acknowledged that the global shortage of trained health workers is putting millions of lives in jeopardy. WHO estimates that, among the professional cadres, more than 800,000 additional doctors and nurses are needed to fill the gap. Yet, despite universal agreement on the extent of the workforce crisis, nowhere near enough new doctors and nurses are being educated and trained – especially in Africa where the need is greatest.

The opportunity

Widespread recognition that health workforce development is one of the keys to better health outcomes, including the achievement of the Millennium Development Goals, has given rise to a new wave of interest in human resources for health, both in countries and among the global public health community. This new interest has been accompanied both by commitments from development partners and by potential new resources for the production of health workers, including doctors and nurses. PEPFAR, for example, has committed to support the education and training of 140,000 new health workers by 2013 with a particular emphasis on doctors and nurses; the Global Fund and GAVI are strongly supporting countries to submit proposals for strengthening health systems, including human resources for health; JICA has committed to train 100,000 more health workers in Sub-Saharan Africa; the UN and its member states have, through the High Level Task Force on Financing, emphasized the need to produce new health workers; the Task Force on Scaling Up Education and Training for Health Workers has produced a 10 year plan; and the issue was addressed at the 2009 G8 Meeting in Italy.

The challenge

The goal is to support an expanded workforce of doctors, nurses and other health care workers that is well trained, effective in meeting the health needs of populations, and sustainable. The task in hand is to support the new political and resource commitments with sound technical and policy guidance and documented examples of effective implementation strategies in order to achieve this common objective.

The purpose of the planning meeting

The meeting was convened to help plan and initiate a new WHO/PEPFAR collaboration that will concentrate specifically on scaling up nursing and medical education in resource constrained countries. This work will build on the previous WHO/PEPFAR collaborations on Task Shifting and Positive Synergies and will involve a wide range of other partners including academic and training institutions from around the globe, professional associations, UN agencies, multi-lateral and bilateral development partners, civil society and implementers.

The function of the meeting was to gather information on medical and nursing education, including learning from countries and institutions where innovative solutions are already being tested and implemented. The information, summarized in this meeting report, will inform the plan of work for the collaboration. The plan of work will lead to the development of evidence-based policy guidance that will serve to support countries in their efforts to scale up medical and nursing education, and will inform the operational aspects of the resource commitments that are being made by development partners.

The presentations and discussion that took place over two days included a wealth of information sharing about current best practice and innovations. The selection of country experiences which were presented at the meeting are summarized in a series of numbered Case Files presented in this report. (See Case Files 1-6) The meeting also included rich discussion around the key areas

for intervention and related challenges and opportunities for policy development and implementation. Areas of consensus around needed interventions and the key points arising are noted. The overarching messages emerging from the discussions are also highlighted.

Setting out the vision

Participants agreed that the professional health workforce of the future must not only be stronger in numbers but must also have greater capacity to serve the priority and evolving health needs of their countries. A new effort to scale up medical and nursing education must include a process of growth and transformation of clinical capacity.

The time is right for such a transformation. The current revitalization of primary health care (PHC) will usher in policy and service delivery reforms at all levels of country health systems with an emphasis on people-centred care and equitable access to services. These systemic reforms will contribute to creating a progressive environment for medical and nursing education and training. The doctors and nurses of the future will need to be properly equipped to deliver care that meets the standards of primary care.

Crucial to this transformation will be the need to place medical and nursing education in the context of the health system so that education, training, research, and service delivery work in synergy, not in isolation.

Key areas of intervention – summary of points arising

Participants agreed that efforts to scale up and transform medical and nursing education must address three dimensions that are interlinked and overlapping: the numbers of doctors and nurses; the appropriateness, quality and relevance of their skills; and the retention of the graduated doctors and nurses over time and where they are needed.

Participants discussed the key interventions that are needed to address these related dimensions and to strengthen the overall capacity of educational institutions. They stressed the need for all interventions to be country-owned and country-led. They noted that significant differences exist between medical education and nursing education such that two separate, but related, lines of investigation may be needed as the work progresses. They also recognized that the overarching need is to strengthen the overall capacity of the educational institutions, working in harmony with national health workforce development plans.

1. Strengthening educational resources and infrastructure

Educating and training greater numbers of doctors and nurses will demand significant growth in the capacity of medical and nursing institutions. Many existing teaching institutions have insufficient basic infrastructure and facilities, including buildings, water and sanitation, transportation, accommodation and facilities for teaching such as equipment and other educational resources. More teaching institutions, teaching hospitals and clinics will be needed to accommodate increased student numbers. Insufficient financial and management capacity are other factors that prevent needed increases in the numbers of medical and nursing students.

2. Training and retaining faculty staff

More students will require more teachers and yet there is currently an insufficient number of medical and nursing faculty to meet the needs. Training and retaining faculty staff is therefore of paramount importance. In order to increase faculty, a number of complex challenges must be overcome. These challenges relate in part to the need to achieve an appropriate balance between teaching, service, research and management duties to ensure that teaching is relevant, that clinical skills are maintained and updated, and that opportunities are available for career development. There are also issues of poor pay and conditions which drive internal and external

migration and problems associated with the relatively low status that can sometimes be accorded to teaching responsibilities, as opposed to research and clinical work.

Further challenges relate to the need for faculty that has the appropriate skills and experience to teach a new generation of doctors and nurses. An emphasis on the primary health care approach will require that teachers have experience in community based medicine and family care.

Some institutions have used creative approaches to faculty development such as including doctors and nurses working in district hospitals or in health clinics in the faculty body, or establishing joint appointments between two institutions and affiliate positions to enrich student learning. Developing clinical preceptor models (identifying experienced doctors, nurses, midwives and expert patients and including them in clinical preceptor programs) can make a valuable contribution to the mentoring pool.

A number of institutions have also explored the potential of international and public-private partnerships. These have proved most successful where strong country leadership can ensure efficient coordination and facilitate an appropriate contribution by partners to country priorities.

3. Making education and training appropriate and relevant to the needs of populations

Doctors and nurses are needed in order to serve the health needs of communities and improve population health outcomes. Therefore the scale up of medical and nursing education must be undertaken with the epidemiological profile of the country in mind. In high-, low- and middle-income countries, there is often a preponderance of specialist hospital-centred training. Some countries are using curricula that are outdated or fail to meet their specific population health needs. Social and cultural values and expectations may tend to associate excellence with specialist skills that serve the needs of a minority of patients with complex conditions. Family or community-oriented medicine, usually better matched to the overall epidemiological burden of the locality, is often afforded a lower status and is relatively poorly paid.

Promoting appropriate and relevant curricula and progressive educational strategies and methodologies is an essential part of the transformative scale-up of medical and nursing education. This includes promoting the incorporation of PHC into curricula, including in postgraduate education, and applying a problem solving based approach to learning. Promoting and supporting family practice, primary care and community medicine and nursing as valid occupations, as well as introducing community/family/primary care medicine as a compulsory rotation within all specializations, and including it in assessments, will all serve to enhance the standing of community medicine and legitimize it as a sub-speciality.

Interdisciplinary elements, as well as multi-professional training that allows different groups of health professionals to learn and work together in teams for some parts of the curriculum, have proved useful in preparing students for the roles and responsibilities they will assume when they are employed.

4. Decentralizing educational opportunities

Educational institutions and teaching hospitals are found predominantly in urban areas and most education and training is conducted within an environment that is isolated from the communities that the graduates will ultimately serve. Innovative models of community-based learning can help to address this by familiarizing students with the needs of the community at an early stage and nurturing a spirit of commitment to public service.

A further dimension of the current centralized nature of medical and nursing education is the way in which the location of educational institutions influences the types of students that can be recruited. A concentration of students in urban settings adversely affects the chances of decentralizing the deployment of graduates when they enter clinical practise – leaving rural and marginalized communities poorly served. Placing educational institutions in the community and assessing performance on the basis of the health outcomes for the surrounding catchment area may contribute to improvements in the responsiveness of health systems to community and population needs.

Examples of innovation and country experiences

Case file 1: Community based learning in Ethiopia

Jimma Medical School in Ethiopia is a pioneer of community based undergraduate and post-graduate education. From their first year through to graduation, medical and nursing students, as well as students of other related disciplines such as pharmacy, laboratory science and environmental health, are deployed to pursue a specific educational objective through research in the community. In the final year this approach is extended to team-based learning whereby teams of students from a range of disciplines are posted to regional, district or community health centres. During their eight week deployment the students learn to apply the skills they have acquired to a wide range of real-life situations. They also learn to work together with colleagues, using a joint problem solving approach, to address the multi-faceted health challenges that are common among the local community.

By using the community as a learning environment, and placing an emphasis on interdisciplinary work, the medical and nursing education programmes at Jimma Medical School have achieved a high degree of relevance. This has been shown to benefit the students – Jimma is becoming widely recognised for the high quality of its graduates – while also contributing to improving the health of the communities that participate in the programme.

Case file 2: A local solution to recruitment, education, and retention in South Africa

Walter Sisulu Medical School was founded in 1985 with a clear objective: to produce doctors with the right skills to practice in the underserved rural communities of South Africa.

The challenge was two-fold. Not only did the region of Transkei need more doctors with the appropriate skills, it also needed more doctors who were motivated and willing to serve in such deprived rural areas.

To meet this challenge, the school needed to equip students with the right kind of scientific and professional knowledge to deal with the particular health care problems of Transkei (including an aptitude for self-directed and life-long learning). It also needed to recruit students with a sense of vocation, and to nurture in them a commitment to public service.

Clearly the Walter Sisulu Medical School has succeeded. A total of 835 doctors have graduated from the school and as many as 70% of these are still working in the immediate area of Kwazulu Natal and the Eastern Cape where they have made a significant contribution to alleviating serious healthcare problems. Some have also found success abroad in countries such as Canada and others have become specialists – confounding the skeptics who argued that the quality of the education at Walter Sisulu might prove inferior to that at more traditional medical schools.

What have been the key elements that have ensured this success?

Firstly, students are recruited largely from the local communities. This has involved particular challenges as the secondary educational opportunities available in the area are poor. The curricula and style of teaching have used problem based methods to enhance learning skills in addition to providing knowledge. The education, research and service programmes of the school are guided by the specific health and social needs of the surrounding population. Partnership with the local health system actors has helped to develop locally relevant competencies.

The curriculum integrates basic and clinical sciences with population health and social sciences. Much of the learning takes place within the community, rather than in university or tertiary hospitals, and is located within the broad health care delivery system. In these ways, early clinical contact increases the relevance of theoretical teaching and the programmes encourage a commitment to public service.

The medical school's approach to faculty development has also emphasized the importance of teachers and mentors having relevant experience of practice in community medicine.

5. Investing in innovative educational strategies, methodologies and technologies

Current models of medical and nursing education are often informed by traditional approaches imported from high-resource countries. These models are not necessarily well suited to low-resource settings or to serving the needs of diverse populations. There are growing pockets of innovation, however, where progressive educational strategies and methodologies are being tried and tested. These new methodologies can be well supported by the internet and other communication technologies including e-libraries and IT learning programmes.

Examples of the use of technology presented at the meeting include: the Collaborative Network to Develop, Update and Share pre-service education content compatible with WHO's public health approach; the Global Network of WHO Collaborating Centres for Nursing and Midwifery Development; as well as a range of country examples which are summarized in the six Case Files presented in this meeting report.

6. Improving quality assurance and performance mechanisms

Existing methods for assessing and assuring the quality of education are rarely standardised across different institutions. Evaluations tend to focus on the skills acquired by individual practitioners, rather than on the health outcomes of the communities they serve. Accreditation of all educational institutions, including those in the private sector, and certification and/or licensing of those who graduate are essential for improving the quality of the educational experience and the resulting workforce.

Continuing education, after graduation, is critical for maintaining high levels of performance and should be linked to certification and licensure mechanisms, as well as opportunities for career advancement.

7. Linking to national planning processes including other sectors

Producing new doctors and nurses without integration into overall national human resource plans can result in a mismatch of graduates to country needs or a shortage of posts for newly qualified staff. Many of the challenges associated with the recruitment, deployment and retention of doctors and nurses also demonstrate the need for stronger links with other sectors of the government, in particular the education, finance and labour sectors. Medical and nursing student numbers cannot be increased, for example, without sufficient numbers of good quality students graduating from secondary educational institutions.

8. Ensuring that regulatory frameworks will create enabling conditions

Restrictive regulation can be an obstacle to the efficient production, deployment and retention of doctors and nurses with skills that are relevant to serving country needs. Regulations governing the scope of practice for nurses can hinder efficient distribution of tasks at different levels of the healthcare system. Recruitment of new and suitable faculty can be limited by regulations that set inappropriate standards of specialization for teaching staff.

9. Costing and financing

Scaling up medical and nursing education implies important financial investment on a long-term basis. Sustainability of the required levels of investment is a challenge. Progressive educational models designed to better serve communities are likely to cost more, not less, than traditional institution-based education.

A long term cost analysis is needed to demonstrate to countries and development partners that investing heavily in higher education in the short and medium term will produce long term efficiencies through population-wide improvements in health.

Examples of innovation and country experiences

Case file 3: Flexible approaches to faculty development in Uganda

Makerere University is finding ways to better meet the country needs and to improve health outcomes in Uganda. Like many teaching institutions in resource-constrained countries, the university is working with some severe constraints. In particular, Makerere has an acute shortage of teaching staff with around 75% of faculty posts currently vacant.

To ease this situation, the university has made extensive use of modern communication technologies and partnerships that allow the programmes to call upon teaching resources and opportunities elsewhere. A mentoring programme allows staff to benefit from world class instruction and to establish career pathways while remaining based in Makerere. Fellowships and faculty exchange programmes are designed to encourage those who leave temporarily to return home. Good use is made of opportunities for teleconferencing with other universities for case conferences and the main lecture hall is currently being rewired to allow for improved video and audio conferencing. An electronic library (HINARI) broadens opportunities for learning in a resource constrained environment by allowing full access to relevant articles on a daily basis.

Makerere has also adopted other innovative educational methodologies, such as community based learning and problem based learning, which encourage students to seek out information and solve problems – skills they will need when practising in the rural areas of Uganda.

Case file 4: Serving rural areas in India

The Christian Medical College (CMC) owes its origins to a young Indian woman, the daughter of a doctor, who was motivated to help her country after realising the urgent need for women doctors in rural communities. In line with these beginnings, the college is much focused on the objective of training practitioners who will work in rural communities in India, rather than migrating to urban centres or to service abroad. The curriculum is highly community oriented at the CMC. The College has a catchment area of 80 villages and serves 100,000 people. Students must serve a compulsory two years in a mission hospital following graduation. The education is based on the principles of PHC. Information systems evaluate the trends in the community of certain indicators, such as prenatal mortality, to inform the relevance of the curriculum and the quality of students and graduates. Particular attention is also paid to faculty development. Most are trained at CMC and have compulsory rotations in centres of excellence abroad.

The college is now one of the most successful teaching hospitals in India and can boast of having graduates in practise all over the world. The greatest claim to success is that 66% of the graduates are still working in India and an impressive 80% of these are working in non-urban settings.

Winning hearts and minds – the need for evidence and advocacy

It was recognized that realising the vision of a larger, stronger and more relevant professional health workforce will demand a shared and united effort from a wide range of constituencies.

Global and national political leadership and the commitment of country policy makers and implementers, including those with an interest in health systems and priority disease programmes as well as those with responsibility for professional education, will be a key to success. The engagement of the leadership in academic institutions and support from the various bodies that represent and regulate the medical and nursing professions will also be essential to the scale up of professional education and training.

Participants recognised that some constituencies may be resistant to change. If stakeholders are to be convinced of the value of alternative approaches to medical and nursing education evidence of what can be achieved through innovative models will be necessary.

Despite the success of various initiatives to increase the numbers of doctors and nurses (see Case Files), efforts to expand these into national programmes are still hindered by a lack of evidence or experience on how to generalize examples of good practice. There is a need for a more systematic process of documentation that can capture the diverse examples of innovation and good practise and use them to build a more comprehensive evidence base.

Two current research programmes were presented at the meeting. The Tulane University Technical Assistance Programme in Ethiopia has undertaken extensive analysis of the human resources for health situation in Ethiopia in order to support the Government of Ethiopia in the development of a strategic development plan to scale up medical education. The Sub-Saharan African Medical Schools Study is collecting data to generate understanding regarding the status, trends, capacity building and retention efforts of medical education in Sub-Saharan Africa. These efforts are making a valuable contribution to existing knowledge of best practice in the field of medical and nursing education.

Better evidence of what works and what does not will serve to increase the confidence of diverse constituencies in the most effective approaches. This knowledge can then inform the development of consensus-based global policy guidance – providing a robust platform for progress.

The plan and the process

The planning meeting ended with an early draft outline of necessary steps which will lead to the development of technical and policy guidance. Consensus and evidence-based guidance will serve to support country efforts to scale up medical and nursing education and will help to inform investment by development partners. The steps identified are:

- Generating interest, engagement and support – increasing awareness among stakeholders through promotion, communication, and advocacy.
- Documentation – mapping current innovations and outcomes and reviewing existing literature to inform discussions and build an evidence base.
- Development of global recommendations and guidance on transformative scale up of medical and nursing education. Support for implementation of the global recommendations and guidelines, including monitoring and evaluation.

Examples of innovation and country experiences

Case file 5: Raising the numbers and status of family health specialists in Brazil

Brazil has made a long-term and sustained investment in the national health system over the past 20 years. Fifty percent of the population is now covered by a total of 30,000 family health teams. Nevertheless, only 4% of the health workforce has specialist training. One of the objectives of the current human resources for health development plan is therefore to increase the numbers of specialist doctors with a particular emphasis on family health, in line with the principles of primary health care around which Brazil's health system has been built.

The traditional training institutions of Brazil lack the capacity to meet this need and tend to adopt a traditional approach that fails to promote family health. Brazil is now using an "open university" model to offer post graduate specialization for 52,000 family health professionals and to provide training for 110,000 health managers between 2008 and 2011. The programme aims to draw on the strengths of different institutions to produce all levels of learning and to upgrade both the quantity and quality of graduates by creating a more robust platform for shared distance learning. Currently twelve universities are involved, with eight of these rated among the top ten in the country. The teaching tools can range from the distribution of CDs for short term, on demand knowledge transfer and other types of e-learning, right through to tutorships, or study for diplomas.

The programme expects to increase the percentage of family health specialists in the country from the current figure of 3.5% to over 56% in the next three years.

The Ministry of Health also uses a number of other parallel approaches to promote the study of family health, such as a programme of financial and conceptual incentives to revise traditional curricula to better address the primary health care agenda.

Case file 6: The power of academic partnerships

There are many examples of alliances between academic institutions in resource-constrained countries and partners in high-income countries such as the USA and the UK. Although some concerns have been raised around lack of coordination and the potential for undue influence on country planning, there are many examples of success – particularly in the areas of faculty development, leadership training, and curriculum development. A number of these were presented at the planning meeting:

The Fogarty International Centre funds training in the USA for medical students from all over the world. The program aims to ensure that study abroad does not contribute to brain drain through careful selection of appropriate candidates; strong inter-institutional collaborations and mentoring; and by focusing on the production of future leadership in global health. A high proportion of graduates do return home to practice medicine and many choose a career in primary care and elect to work with disadvantaged groups.

The University of Nigeria has forged a partnership with the University of Maryland in the USA which aims to build the intrinsic capacity of in-country medical institutions with the long term objective of building overall medical capacity in Nigeria. The programme adopts a phased approach to human resource development, starting with opportunities for faculty to travel to the US for training. This first phase involves faculty in 6-10 month placements for advanced clinical teaching. The second phase sends highly trained faculty from the US to Nigeria to teach there. In phase three, highly motivated students are recruited from Nigeria for training in the US but with the expectation that they will return to Nigeria at the end of the seven year residency and fellowship programme. The partners are now working to build greater residency training in country and to transfer leadership to indigenous experts. Phase four is a strategic alliance with leading universities and teaching hospitals or medical schools to develop technical experts at all levels.

The recently launched Zambia UK Health Workforce Alliance will support the implementation of the Zambian human resources plan by providing educational faculty and other support to scale up medical training by 50%, nursing and midwifery training by 75% and by providing specialty training in areas not currently covered in Zambia. The alliance will provide opportunities for learning and development for health workers and institutions both in Zambia and in the UK.

Presentations

The following presentations were given at the WHO/PEPFAR planning meeting on scaling up nursing and medical education. These are available in powerpoint format at www.who.int/hrh/events/2009

Scaling up education of health workers: the challenges

Dr Manuel Dayrit, Director, Human Resources for Health, WHO

The US President's Emergency Plan for AIDS Relief – HRH: Building Sustainable Capacity

Ms Joan Parise Holloway, Senior Technical Advisor, Human Resources for Health and Health Systems Strengthening, Office of the U.S. Global AIDS Coordinator

Scaling up medical and nursing education: experiences from countries:

Jimma Medical School, Ethiopia

Dr Abraham Haileamlak

Walter Sisulu Medical School, South Africa

Dr Jehu E Iputo

Makerere University, Uganda

Dr Lydia Mpanga Sebuyira and Dr Sara Groves

Christian Medical College, India

Dr Jayaprakash Muliyl

University of Nigeria, Nigeria

Dr Michael Obiefune

IMAI and the pre-service collaborative network, WHO

Dr Sandy Gove

Innovative practices and approaches in medical and nursing education:

The Brazilian Open University of the National Health System

Dr Francisco Eduardo De Campos, National Secretary for Human Resources Development, Ministry of Health, Brazil

Innovative Approaches in Medical Education in Ethiopia

Dr Wuleta Lemma, Co-Director Center for Global Health Equity and Country Director Ethiopia Program, Tulane University, USA

Innovative Strategies in Health Workforce Education and Practice

Dr Jean Yan, Coordinator, HPN, Human Resources for Health, WHO

Avoiding Brain Drain and Nurturing Global Health Leaders: Innovative Fogarty and UW approaches

Dr Carey Farquhar, Director, AIDS International Training and Research Program, Fogarty Centre, University of Washington, USA

An African Alliance? Zambia UK Health Workforce Alliance

Lord Nigel Crisp, House of Lords, UK

Sub-Saharan African Medical Schools Study (SAMSS)

Dr Fitzhugh Mullan, Murdock Head Professor of Medicine and Health Policy, George Washington University, USA

List of participants

Rebecca J. Bailey, The Global Fund to Fight Aids, TB and Malaria, Switzerland

Nigel Crisp, House of Lords, United Kingdom

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Anne Sliney, The Clinton Foundation HIV/AIDS Initiative, United States of America

Deborah von Zinkernagel, Pangaea Global AIDS Foundation, United States of America

Anna Wright, Writer – Global Public Health, United Kingdom

José M. Zuniga, International Association of Physicians in AIDS Care, United States of America

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