1. Introduction

1.1 Introduction

This report on the guidelines for Transforming and Scaling up Health Professionals' Education and Training provides a set of recommendations that are evidence-informed, practical, and relevant to ensure that globally there is a health professional workforce that meets the health care needs of the 21st century.

The primary goal in developing the guidelines was to provide health policy-makers and other important stakeholders with evidence-informed guidelines to better understand the issues and to provide strategies to achieve transforming and scaling up of the education and training of health professionals that will contribute to health system strengthening and improve health outcomes.

The key objective for creating this report was to develop guidelines that would provide concrete implementation considerations that ensure equitable access to health services and aim at policy development for a workforce, with the right skills-mix and deployed rationally across different levels of care. A workforce is needed that is accessible to all citizens, and stays motivated to produce high quality services efficiently.

The guidelines aim to:

1. **provide sound policy and technical guidance in the area of pre-service education, particularly to countries experiencing shortages of health professionals;**

2. **foster the integration of continuing professional development (CPD) as part of health professionals' education scale-up, in order to ensure excellence of care, responsive health service delivery and sustainable health systems;**

3. **define and provide guiding principles for transforming and scaling up health professionals' education and training.**

Before developing the recommendations, the following definitions were used to guide the process:

"The transformative scale-up of health professionals' education and training is defined as the expansion and reform of health professionals' education and training to increase the quantity, quality and relevance of health professionals so as to best meet population health needs and expectations in an equitable and efficient manner and, in so doing, strengthen countries' health systems and improve population health outcomes."

Transformation and scaling up of education and training is a multidimensional process that involves not only increasing the number of health professionals, but also more importantly, ensuring that they have the knowledge, skills and competencies relevant to the needs of the population. This process also requires building the institutional capacity to produce and employ the desired number and skill mix of health professionals in a sustainable manner. Additionally, this process includes the development of a sufficient and competent workforce of educators and trainers, the utilization of effective education methods, and access to adequate infrastructure, equipment and learning tools.

Why is WHO developing guidelines?

In 2006, the World Health Assembly (WHA) called on all Member States to contribute to a rapid scaling up of the production of health workers (resolution WHA59.23, Box 3). The resolution also called for the development of national comprehensive health workforce strategies.

Box 3. **Excerpts of WHA Resolution 59.23 – Rapid scaling up of health workforce production**

The Fifty-ninth World Health Assembly,

(…)

Recognizing that shortages of these health workers are interfering with efforts to achieve the internationally agreed health-related development goals, including those contained in the Millennium Declaration, and those of WHO's priority programmes;

(…)

Recognizing the importance of achieving the goals of self-sufficiency in health workforce development,

…URGES Member States to affirm their commitment to the training of more health workers by:

(…)

(2) promoting training in accredited institutions of a full spectrum of high-quality professionals, and also community health workers, public health workers and paraprofessionals;

(…)

(4) promoting the concept of training partnerships between schools in industrialized and developing countries involving exchanges of faculty and students;

(…)

(6) using innovative approaches to teaching in industrialized and developing countries, with state-of-the-art teaching materials and continuing education through the innovative use of information and communications technology….

Source: WHO (2006b).

1.2 The domains for action: focus of the guidelines

The Guidelines Development Group members identified five main 'domains' for attention and action by policy-makers:

1. **Education and training institutions**
2. **Accreditation and regulation**
3. **Financing and sustainability**
4. **Monitoring, implementation and evaluation**
5. **Governance and planning.**

The guidelines describe each of these domains, summarize available evidence and provide recommendations and implementation considerations. The last section identifies gaps in knowledge indicative of the need for further research, either at country or at global level.

To seek transformation in these five areas, the Group's work was guided by a series of principles considered fundamental for success (Box 4).

Box 4. **The fundamental principles for the transformation success**

- Be country-owned, country-led, context-specific, and embedded in the broader socio-economic and development characteristics of communities and populations.
- Respond to population health needs and expectations, and adapt to evolving epidemiological profiles and burden of disease.
- Aim at health equity, delivery of people-centred services, responsiveness and inclusion.
- Foster the use of effective strategies of promotion, prevention, education and rehabilitation.
- Contribute to universal access to health services.
- Be designed and implemented system-wide and through multi-sectoral coordination and inclusion of all relevant public and private sector stakeholders and policy-makers.
- Be aligned with national health objectives and strategies and human resources for health plans (evidence-based, costed and sustainable).
- Apply a combination of context-specific interventions, applicable in both the public and private sectors, in broad areas such as: governance; education and training institutions; regulatory frameworks; financing; and planning.
- Produce health professionals who are globally competent and locally relevant, able to serve their local communities in an effective manner.
- Ensure that increased production of health professionals is accompanied by an increased absorptive capacity of the labour market to employ and retain additional health workers.
- Be supported by significant long-term financial investment, and effective leadership and management, good information systems and political commitment.
- Be monitored and assessed with respect to the quantity, quality and relevance of professionals practicing within the health system, and not simply on the numbers of new graduates.

Source: Guidelines Development Group, 2012

1.3 Scope of the guidelines

The guidelines encompass the education and training of all groups of health professionals (see Annex 1 for definitions). The recommended considerations and interventions, thereby, apply to all levels of education and training of health professionals across the continuum of undergraduate, postgraduate, faculty development and continuing professional development in both the public and private sectors in all countries.

1.4 Methodology of evidence–informed guidelines

The process of developing WHO guidelines encompasses the synthesis of all available published research and grey literature evidence; formal assessment of the quality of evidence; consideration of resource use and costs; and consideration of values and preferences. The formal assessment of quality of evidence includes the use of a transparent system for assessing evidence and rating recommendations following the GRADE methodology. This process links evidence to recommendations and explains the reason that judgements were taken at each step along the way. By design, the process was steered by the WHO secretariat with the support of the core guidelines development group that included content experts for specialties involved, a methodologist and representatives of potential stakeholders and that maintained a geographic and gender balance.

Using a multi-pronged methodological strategy for creating evidence-informed guidelines, the approach was inclusive of a comprehensive scoping literature review and analysis of systematic reviews covering other related published evidence, in addition to a review of the grey literature.

The process of developing the guidelines began in 2009 with an extensive scoping of the literature on health professionals' education, gathering expert opinion through the formation of a large reference group that met three times in 2010, and building consensus that culminated in the first meeting of the Core Guidelines Development Group in Divonne, France in May 2011.

The guidelines have been developed in parallel with a strong implementation platform with the Medical Education Partnership Initiative (MEPI), the Nursing Education Partnership Initiative (NEPI), the United States President's Emergency Plan for AIDS Relief (PEPFAR), and other partners. The secretariat is also engaging additional multi-sector stakeholders and civil society to galvanize support for a global advocacy movement around the need for health professionals' education and training reform.

The second meeting of the group was called to:

- **advise on the priority of questions and scope of the guidelines;**
- **advise on the choice of important outcomes for decision-making;**
- **comment on the evidence used to inform the guidelines;**
- **advise on the interpretation of evidence, with explicit consideration of the overall balance of resource use, values and preferences, benefits and risks;**
- **formulate recommendations, taking into account diverse values and preferences according to GRADE.**

Every effort was made to comply with standards for reporting, processing and using evidence as set by the WHO Guidelines Review Committee (GRC). The Guidelines Development Group used a multi-pronged methodological approach to bring together the evidence available in support of the guidelines, so that countries can use them with reasonable assurance that they will facilitate sound policy development in matters of health professionals' education. The following steps were taken:

- **An outcomes framework, based on the guiding principles for transforming and scaling up health professionals' education and training, was designed to inform the development of the recommendations (Annex 14).**
- **A comprehensive literature review was undertaken to provide as wide an understanding of the areas involved as possible initially, followed by the drafting of PICO (population/intervention/comparison/ outcome) questions and the commissioning of systematic reviews, covering other related published evidence and grey literature relating to these questions. A template was used for conducting systematic reviews in order to ensure uniformity and comparability and the data collected was recorded in a decision table (see Annex 7 for decision tables).**
- **Evidence tables were developed based on the systematic reviews (see http://www.who.int/hrh/education/planning/en/index.html).**
  The systematic reviewers assessed the risk of bias in each of the randomized studies included, guided by the following criteria:
  - Inadequate sequence generation;
  - Inadequate allocation concealment;
  - Lack of blinding of participants, providers data collectors, outcome adjudicators and data analysts;
  - Incompleteness of outcome data;
  - Selective outcome reporting, and other bias.

  The systematic reviewers assessed the risk of bias in each included non-randomized studies guided by the following criteria:
  - Failure to develop and apply appropriate eligibility criteria (e.g. under-or over-matching in case-control studies, selection of exposed and unexposed subjects in cohort studies, selection of exposed and unexposed in cohort studies from different populations);
  - Flawed measurement of both exposure and outcome (e.g. differences in measurement of exposure such as recall bias in case-controlled studies, differential surveillance for outcome in exposed and unexposed in cohort studies);
  - Failure to adequately control confounding (e.g. failure of accurate measurement of all known prognostic factors, failure to match for prognostic factors and/or adjustment in statistical analysis);
  - Incomplete follow-up.
  - With regard to how the data was synthesized, it should be noted that the same PICO question did not necessarily assess the same outcomes. Even when they did, they did not necessarily use the same measurement instruments or approaches. Even when using the same instruments or approaches, they did not report enough statistical data to allow a meta-analysis of the data. As a consequence, we report the results in a narrative manner and when available, we describe the statistical results as reported by the authors of the original studies. This means that in some cases a range of relative effects (e.g. odds ratio or relative ratio) may be presented, while in other cases a relative effect with or without a confidence interval may be presented.

- **In addition to the above, and in order to strengthen the issue of relevance, which is one of the three outcomes guiding these recommendations, two surveys were conducted[1]. A feasibility and acceptability survey gathered the views of 136 stakeholders and potential beneficiaries of the recommendations from all WHO regions; and a civil society survey (169 respondents) provided views and expectations on the main areas of interest in the guidelines. This was also a strategy to better identify the roles and contribution of civil society to the transformational education agenda and movement and, at the same time, to deepen its engagement as a key stakeholder in the work of the Core Group. Discussions were conducted via e-mail and during two workshops that took place in Divonne-les-Bains (France) in May 2011 and in Washington D.C. (USA) in March 2012.**
- **Decision tables were developed by the Guidelines Development Group based on all the evidence provided from the evidence tables based on systematic reviews, literature reviews and the feasibility and acceptability study.**

1.5 Expected beneficiaries and benefits

The primary beneficiaries of these guidelines are policy and decision-makers in the health and education sectors, educators, and future and current health professionals. However, the guidelines are conceived for the ultimate benefit of users of health services, whose needs should determine the quantity, quality and relevance of the education of health professionals. The guidelines recommendations can be strong or conditional depending on the quality of the supporting evidence, the balance of benefits and harms, resource use, feasibility and acceptability. *In no case should the guidelines be seen as a blueprint, which can be applied without taking into account the context.* They are orientations that stakeholders should consider in developing their own responses to their country's problems. Not all needs to change; some practices may be maintained and improved, others should be abandoned and new ones introduced. Policy-makers must decide what is most relevant for their population.

Civil society can also benefit from these recommendations and can contribute to their successful implementation through advocacy and policy dialogue, and by demanding accountability from government, training institutions and development partners.

1.6 Dissemination process

The guidelines document will be printed and made available on the WHO website. It will be complemented by an interactive ePlatform linked to the website for feedback and comments. It will also be available on CD-ROM and circulated through WHO channels for adaptation and implementation at country level.

An NGO in official relations with WHO has agreed to set up a Task Force consisting of representatives of education and training institutions, as well as NGOs involved in working with universities to improve governance of academic institutions and make curricula more relevant.

Because there were a number of policy makers, regulatory bodies, collaborators and country partners who were members of the Guidelines Development Group, they have committed, in the second meeting of the Guidelines Development Group, to implement the guidelines through mechanisms and activities in their own institutions. They have also indicated willingness to provide advocacy for the guidelines by inserting discussions into the guidelines in to the agendas of their global or regional meetings, with the objective of identifying areas in which their institutions can embed the guidelines into their work at the county level.

Given the involvement and interest of civil society organizations who are also service providers, they have also agreed to establish working groups in the areas of education and training institutions; governance of training institutions; accreditation and regulation, financing and sustainability; and performance and social accountability to provide global and country advocacy messages using the recommendations of the guidelines.

It is planned that the guidelines will be translated into all the UN languages and disseminated. The recommendations given in this document are expected to remain valid until 2016. The Human Resources for Health Team at WHO Headquarters in Geneva will be responsible for initiating a review of these global recommendations at that time, based on new evidence and research and feedback from countries that have been using the recommendations.

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1   http://www.who.int/hrh/education/planning/en/index.html

1.7 Conflicts of interest

The WHO Secretariat reviewed all declarations, and found no case where there was involvement in remuneration that was seen as a compromising factor. There was also a further declaration at the Guidelines Development Group meeting. Overall, the WHO Guidelines Steering Group and WHO Secretariat were satisfied that there had been a transparent declaration of interests, and that no case necessitated exclusion from the deliberations. The broad range of constituencies represented on the Guidelines Development Group was also noted, and that the majority of members had no declared interests. All individuals with declared interests therefore proceeded to participate fully in the Guidelines Development Group meetings or to act as peer reviewers. Please see Annex 15 for further details.

1.8 Peer review process

A full draft of the guidelines was circulated for comment to members of the Guidelines Development Group and the external peer review group. All members of the Guidelines Development Group and peer review group completed WHO declaration of interest forms (which included requests for information on receipt of payment for consultations and participation in advisory panels). A total of 37 Guidelines Development Group members (excluding WHO staff) and all peer reviewers signed declarations of interest. In order to contain costs for attendance at the meeting employers of members of the group who could afford to were requested to sponsor their travel and others who could not were sponsored by WHO. This arrangement was made very clear in correspondence to Guidelines Development Group Members. Seven members of the Guidelines Development Group declared receipt of remuneration (via consultancy) from another university and five of the seven peer reviewers.

1.9 The Guidelines Development Group

The composition of the Group was in accordance with WHO procedures for developing guidelines and included health professionals, academics, pedagogical experts, policy makers, representatives of regulatory bodies and professional associations, technical experts in human resources for health, development agencies, UNESCO, World Bank representatives, guidelines methodologist and civil society representatives. Appropriate representation by geography and sex was also considered. Regional Advisers/programme managers of human resources for health of all the WHO Regional offices were also represented.

1.10 Structure of the document

The Guidelines discuss issues that are broader than the areas for which recommendations have been made, but the body of the document is largely grouped around the five 'domains': education and training institutions, accreditation and regulation, financing, monitoring and evaluation, and governance. Each domain includes various sub-dimensions. Recommendations are made in four of these five domains; for each, a summary of the evidence tables and a commentary on implementation considerations is presented.

A final section identifies gaps in available knowledge, which should be further researched at country and global levels.