(Cameron, et al., 2009). Other studies showed an increase in first year students' confidence in their own professional identity and IPE helped them to be better prepared for clinical placement (Terry, et al., 2009). In another intervention, a group's experiences in a course where students met weekly for three hours during one semester showed positive attitudes to team collaboration (Hamilton, et al., 2008). Yet another interdisciplinary community-oriented exercise offered unique opportunities for students to appreciate health problems as they occurred in the community (Pollard, et al., 2006).

Implementation Considerations:

WHO identifies IPE as the process by which a group of more than two profession specific students from health-related occupations with different educational backgrounds learn together during certain periods of their education with interaction as an important goal (WHO, 2010c). The strategies and considerations for introducing or improving IPE have been well described in the document Framework for Action on Interprofessional Education & Collaborative Practice (WHO, 2010c) . Essentially, IPE is shaped by mechanisms that can be broadly classified into those driven by: (a) staff responsible for developing, delivering, funding and managing IPE; and (b) educator mechanisms (the term 'educator' includes all instructors, trainers, faculty, preceptors, lecturers and facilitators who work within any education or health-care institution, as well as the individuals who support them). Developing IPE curricula is a complex process, and may involve staff from different faculties, work settings and locations. More important however, is maintaining IPE. This can be equally complex and requires careful consideration. The following key issues should be considered as priority for policy-makers when introducing, improving and sustaining IPE.

- **Supportive institutional policies and managerial commitment.**
- **Good communication among participants.**
- **Enthusiasm for the work being done.**
- **A shared vision and understanding of the benefits of introducing a new curriculum.**
- **A champion who is responsible for coordinating educational activities and identifying barriers to progress.**
- **Careful preparation of instructors for their roles in developing, delivering and evaluating IPE.**
- **For most educators, teaching students how to learn about, from and with each other is a new and challenging experience.**
- **For IPE to be successfully embedded in curricula and training packages, the early experiences of staff must be positive. This will ensure continued involvement and a willingness to further develop the curriculum based on student feedback.**
- **Curricular development and delivery mechanisms should be fully appreciated. Health-care and education around the world are provided by different types of educators and health workers who offer a range of services at different times and locations. This adds a significant layer of coordination for interprofessional educators and curriculum developers.**

In interprofessional education, students from various professions learn together as a team. Their collaborative interaction is characterized by the integration and modification of different professions' contributions in light of input from other professions. The hallmark of IPE is the type of cognitive and behavioural change that occurs when participants understand and are familiar with the basic language and mind-sets of various disciplines. Prior to participating in IPE students must have basic knowledge and skills related to their own profession. IPE is an essential step in development of a collaborative health workforce.

A number of principles are believed to be important in the design of IPE curricula include:

(a) relevance to learners' current or future practices;

(b) use of typical, priority health problems that require interprofessional approaches for their solution:

(c) interprofessional learning based on clinical practice

(d) learning methods that facilitate interaction between learners from different professions including small group learning. Formats such as case-based and problem-based learning have been shown to be particularly effective.

4.2 Accreditation

4.2.1 Accreditation

RECOMMENDATION 10

National governments should introduce accreditation of health professionals' education where it does not exist and strengthen it where it where it does exist.

Quality of the evidence: **Low**
Strength of the recommendation: **Strong**

We recommend the option

Key considerations:

- strengthen existing health professional accreditation
- accreditation must be based on standards
- it must be supported by legislation
- it should be done independently
- the process should be transparent
- the system and process should be periodically evaluated.

In spite of the low quality of the evidence, the panel decided to issue a strong recommendation because a very high value was placed on an uncertain but potentially important impact on both the quality and relevance of the health workforce.

Summary of the evidence

Accreditation is defined as a process of review and approval by which an institution or programme is granted time-limited recognition of having met certain established standards (Uys and Coetze, 2012). Accreditation, if properly used, is a key tool for quality management of professional education and for ensuring that graduates have the competencies that correspond to accepted professional standards and to the needs of the population. The alignment of accreditation with health goals is one of the four enabling actions that contribute to scaling up the education of health professionals (Frenk, et al., 2010). Accreditation is particularly important at a time when private health professionals' education is proliferating, often in an unregulated environment.

There is no systematic assessment of accreditation practices worldwide; there is variation in its utilization and, in some countries, it is absent or exists only on paper. Accreditation mechanisms *"exist in three quarters of Eastern Mediterranean countries, just under half of the countries in Southeast Asia, and only about a third of African countries"* (Frenk, et al., 2010:29). Even in an integrated economic region such as the European Union (EU), there are important variations in how accreditation is conducted (Frenk, et al., 2010). There does not seem to be a relationship between the Gross National Income (GNI) level of countries and whether or not they have accreditation systems (Uys and Coetze, 2012). Also, private schools are less likely to undergo accreditation procedures (Frenk, et al., 2010).

In some countries, accreditation is performed by the government, in others by professional councils or associations, or private agencies (Uys and Coetze, 2012). Accreditation may target specific programmes or whole institutions. There is limited literature on the respective advantages and disadvantages of each modality, or on the impact of accreditation on quality improvement.

Nevertheless, it is generally considered that accreditation can have a significant positive effect on the quality and relevance of the health workforce in that it can guide professional education in addressing the priority health concerns of the community. A global strategy that incorporates the best of all practices with clear targets and outputs could encourage regions to create and reinforce national accreditation systems.

In order to be effective, such a global system should be based on standards developed and accepted by all stakeholders. The process of accreditation should be independent and transparent so as to be a stamp of quality (Baumann and Blythe 2008). Accreditation status should be time-limited, and the accreditation system itself should be periodically evaluated.

Implementation Considerations:

Accreditation, and similar mechanisms such as regular programme reviews, are well established in some countries (Australia, Canada, South Africa, USA), developing in others, and weak or absent in quite a number, particularly among lower income countries. A first action might be to raise awareness of the potential gains in quality and relevance that come with well-conducted accreditation practices. Political commitment to higher quality education is the first component to be considered in developing accreditation mechanisms, as some educational bodies may feel that accreditation threatens their vested interests, particularly if the objective is to sanction rather than to help institutions to improve their performance. Examples of successful practices need to be analysed and disseminated. Fostering voluntary accreditation may increase the commitment of participating institutions and the legitimacy of the whole process, which can be seen as a "social contract" between institutions and the community (Dussault, 2008). Being accredited by a reputable mechanism and accrediting body brings status and recognition, and can be a strong incentive to maintaining high standards.

Global cooperation and collaborative efforts aid in setting standards and assisting countries in developing the capacity for local adaptation and implementation, and in facilitating information exchange (Frenk, et al., 2010). The Global Consensus on Social Accountability and the long-standing WHO agenda on social accountability of health professions' schools can serve as basis for such cooperation.

In many countries, the essential components of internationally accepted regulatory good practices are missing. This is especially true in low-income countries where regulators, in particular professional councils, may lack the authority, resources or even technical capacity to ensure effective regulation. In such cases, the state should be the regulator and gradually delegate licensure and authority as professional groups' capacity develops (Dussault 2008). Care must be taken that quality assurance regulation does not restrict flexibility in the delegation of tasks or in the co-sharing of certain rights to practice. This would have negative effects such as making team work less effective, or limiting the possibility of creating new cadres who could help mitigate the shortages of certain professional groups, and provide essential care particularly to underserved populations. There is broad consensus that the accreditation of institutions is needed to ensure quality of care and patient safety, but there is no universal way of doing it.

The lack of evidence and studies assessing the impact of health professionals accreditation as part of regulation does not mean that there should be no regulation. Indeed, an in spite of the low quality of evidence, the panel decided to issue a strong recommendation because a very high value was placed on an uncertain but potentially important impact on both the quality and relevance of the health workforce.

4.3 Continuous professional development (CPD) for health professionals

RECOMMENDATION 11

Health professionals' education and training institutions should implement continuous professional development and in-service training of health professionals relevant to the evolving health-care needs of their communities.

Quality of the evidence: **Moderate**
Strength of the recommendation: **Conditional**

We recommend the option in the context of close monitoring and evaluation

Key considerations:

- CPD would be transformative education if focused in areas where there are resource shortages.

Summary of the evidence

As part of a changing health services system, health workers need to keep up with the evolving health needs, policies, technologies and knowledge (WHO, 2006a; Frenk, et al., 2010). The exponential progress in technology, diagnostic tools and treatment methods, as well as changing population demographics and disease burden, makes updating and maintaining the knowledge and skills of health workers throughout their professional life more important than ever. Continuing professional development (CPD) refers to educational activities conducted after graduation to maintain, improve and adapt the knowledge, skills, attitudes and practices of health professionals, so that they can continue to safely and effectively provide health services.

There is some evidence of positive effects, for example, improvements in knowledge, skills and attitudes, as well as in clinical practice and health outcomes (weight gain or child-carers' retention of nutrition advice), but the effects of CPD have not been systematic. In some studies, knowledge had improved, but clinical habits had not always changed (Johnson, 2012). Stakeholders' acceptability was good and access to CPD was much valued and could be an important factor in retaining health professionals (WHO, 2010b).

The relative effectiveness of CPD methods depends on numerous factors, such as the intended target, the purpose (transfer of knowledge, acquisition of new skills, familiarity with a new technique), the techniques used, who delivers the training, and the subject. Reviews of studies of CPD programmes for medical professionals indicate that interactive techniques, reminders, patient-mediated interventions, outreach visits, multifaceted activities, audit with feedback, conferences, printed information and didactic activities without practice were found to be ineffective, though they are widely used (Davies, 1995; Bloom, 2005). The use of case studies and a combination of techniques, including multiple exposure, was found to be more effective (Mariannopoulos, et al., 2007; Forsetlund, et al., 2009). Effectiveness is also increased when CPD is linked to career progress and other educational interventions (WHO, 2010b). The strength of these conclusions is limited due to the variable quality of the methodologies used in the reviewed studies, but available evidence has good face validity and indicates credible trends.

Implementation Considerations:

Given the diversity of objectives CPD can pursue and the pedagogical approaches undertaken, CPD is difficult to standardize. CPD can be made mandatory, as is in place or being introduced in many countries, or can be include in accreditation criteria. In some countries, the educational institutions are accredited and left to decide how to organize CPD, and carry out periodic monitoring and reviewing by applying the same principles as for pre-service education. In other countries, professional councils are responsible for CPD.

Although warranting study, the cost-effectiveness of CPD interventions has had little attention. However, some impacts may be difficult to capture as CPD is not only an activity for knowledge acquisition or skills development, but it is also as an opportunity for health professionals to interact with other practitioners and to maintain professional and social networks, which is an important motivational factor. This is particularly important for professionals working in isolated regions (Van, et al., 2008).

4.5 Monitoring, implementation and evaluation

One of the main causes of shortages is inadequate numbers of persons with appropriate education and training entering the health workforce labour market. Many low and middle-income countries do not have the sophisticated data collection systems needed by ministries of health and education to assess unmet needs nor the capacity to analyse and utilize this data to inform and strategically envision, determine, and plan health workforce strategies.

4.4.1 Monitoring health workforce supply and planning for the future

It is critical to monitor and track each of the components of capacity and output. By drawing on assessments of oversupply or undersupply of various cadres of the active health workforce, institutional capacity for producing new health workers can be reduced or increased, or training programmes for new cadres can be developed. This information can be used to identify the specific bottlenecks in capacity so that if rapid increases in production are required, capacity can be increased accordingly.

4.4.2 Monitoring certification rates

Monitoring the intake of students into health professional programmes and pass/failure rates on licensing and certification exams may indicate problems with entry requirements, the curricula, the teaching methods used or a number of other issues such as the lack of clinical placements, or a combination of factors. Each situation would have to be evaluated to determine where the problems lie.

An important consideration, in addition to the number of graduates who are certified to practice, is their locale of practice upon graduation. High departure rates, through exit from the health sector or through migration to other countries, is an indicator of major retention problems that require the immediate attention of policy-makers. The same applies if data show an overconcentration of new graduates in well-served areas and organizations. There are cases where graduates succeed in the institutional proficiency tests, but fail the certification exam, indicating a mismatch in the level of proficiency expected at the institutional versus the certification level.

In settings with extreme shortages or maldistribution of highly skilled service providers, it is important to institute mechanisms to monitor the quality of the large cadres of lower skilled workers who are trained to meet the immediate needs for basic health services among unserved and underserved, mainly rural communities. Since these workers will often be the first point of contact with the formal health-care system, and therefore will represent the system at the community level, guaranteeing the quality of their training and practice through proper certification and supervision is of extreme importance.

4.5 Good practice recommendations: Governance and planning

In addition to the twelve cited recommendations in this report, there are four good practice recommendations proposed that are equally viewed as vital for successfully transforming health professionals' education.

4.5.1 Good practice 1

Government at the highest level shows political commitment to reform and takes leadership of its implementation.

4.5.2 Good practice 2

There is formal collaboration and shared accountability between the ministry of health, the ministry of education, and other related ministries (e.g. finance, labour, public service), at national and/or sub-national level in the education and training of health professionals.

4.5.3 Good practice 3

A national plan to produce and retain graduates is developed in consultation with stakeholders, informed by the needs and absorptive capacity of the labour market, and aligned with the national health plan.

4.5.4 Good practice 4

The creation or strengthening of national or sub-national institutions, capacities or mechanisms to support the implementation of the reform and scale-up plan (e.g. legislation, policies, procedures).

4.6 Civil society suggestions

This section uses excerpts from the suggestions made by civil society based on the on-line survey that drew 160 responses out of 304 civil society organizations in low and middle-income countries[21]. To advance the contributions of what is termed 'Southern' civil society to the transformational education initiative, the results of the survey form the basis for the following suggestions:

1. **Research findings must be translated into practice to meet the needs and encourage the support of policy-makers and civil society advocates.**
2. **Cost-effectiveness studies on a larger scale are needed, but equal weight should be given to assessing and building up Southern civil society[22] capacity and ability to support the initiative.**
3. **Given the scope of the initiative, standard methods and metrics should be developed for transformational education research and practice.**
4. **The implementation of national agendas for civil society research and evaluation processes should be enabled to foster comprehensive polices that subsequently enhance the sustainability of the civil society workforce and leadership in guiding policy recommendations.**
5. **The inclusion of Southern civil society perspectives should be a critical step in the process of improving and scaling up health professionals' education.**
6. **The integration of Southern civil society in health population programmes should be promoted and enabled.**
7. **A phased/tailored approach to scaling up should be used.**
8. **Scaling up should be tailored to contextual circumstances, and delivery should be decentralized.**
9. **An integrated approach to scaling up should be adopted.**
10. **Strong leadership and governance are needed for the entirety of the scale-up process.**
11. **Local implementers and other stakeholders should be encouraged and engaged.**
12. **Both state and non-state actors should be used as implementers.**
13. **Engaged and "activated" underserved communities are key to the success of scaling up.**
14. **Political will should be demonstrated for national policies.**
15. **The critical issue of country ownership should be addressed consistently throughout the transformative process.**
16. **Research results should be incorporated into implementation: learning and 'doing'.**

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21 http://www.who.int/hrh/education/en/

22 Civil society organizations located in the economic South. Civil society here is understood broadly to include for example, faith-based organizations, popular movements, interest-based organizations, essentially 'non-state' actors.

5. Knowledge gaps and research agenda

Evidence supporting a transformational change in the education and scaling up of health professionals is incomplete. Knowledge gaps exist, but well-designed and coordinated research can help fill them. The existing literature often lacks methodological rigour, and in most cases research results have little external validity. Efforts are made in this and other complex fields to develop methodological approaches that augment the strength of the evidence produced by research. The following questions raised under each of the five domain areas during the search for evidence on which the recommendations could serve as a basis for further investigation.

5.1 Education and training institutions

- Do health faculty development programmes increase confidence in teaching?
- How and why do they make a difference in students' learning and clinical performance? What areas the effects of faculty development initiatives on patient outcomes and the health of populations? (Couper et al. 2012).
- Do alternative pedagogical approaches such as problem-based learning, increased use of simulation methods, inter-professional education, improve student learning in the long term?
- What are the training needs of educators that are generated by the utilization of innovative learning strategies?
- Do changes in recruitment practices have an impact on the retention of health workers in underserved poor, isolated or rural zones?
- What is the impact of decentralizing education and training programmes on rural recruitment and retention of health professionals?
- What is the impact of inter-professional education on health professional practice (on teamwork for example)?
- What are the effects of simulation methods on patient outcomes?

5.2 Accreditation and regulation

- What are the impacts of accreditation and regulation mechanisms of the education and training of health professionals on their quantity, quality, and relevance?
- What factors influence the success or failure of accreditation and regulation mechanisms of the education and training of health professionals?
- Which indicators best capture success or failure?
- How feasible is creating career ladders? What are the benefits in terms of augmenting the availability of health professionals?
- What are the effects of different modalities of continuing professional development strategies on the performance of professionals, on their motivation and satisfaction, and on retention?
- What are the factors that influence their effectiveness?

5.3 Financing and sustainability

- What are the costs (and their components) and benefits of the different strategies for scaling up the production capacity of education and training institutions?
- What are the costs induced by the entry of more professionals on the health labour market?
- What financial and other incentives are more likely to maintain the motivation of educators?
- What are the comparative advantages of different modalities of financing the transformation and scaling up of the education and training of health professionals?

5.4 Monitoring, implementation and evaluation

- Which indicators are more appropriate to monitor and evaluate the process of transforming and scaling up the education and training of health professionals? Which indicators have more capacity to alert implementers of the reform as to deviations from the expected course?

5.5 Governance and planning

- What are the constraints and facilitators of developing effective policies of transformation and scaling up of the education and training of health professionals?
- What are the effects of active participation of representatives from key stakeholder groups in the governance structures of health professional schools on the quantity, quality and relevance of health professionals?
- Which governance structures and mechanisms contribute better to the sustainability of reform, and to maintain political and stakeholders' commitment?

The above questions suggest a series of research activities that can help bridge the knowledge gaps identified and support the policy and decision-making processes. These are in addition to data collection on education and training institutions (infrastructure, personnel students, and financial resources) and to continuing and careful monitoring of the process of reform.

Examples are:

- Exploration of the advantages and disadvantages of more innovative methods to deliver CPD, such as internet-based or use of mobile phones.
- Long-term evaluation of the impact of new curricula through cohort analysis.
- Longitudinal studies linking the retention of health workers trained in community and rural settings to changes in recruitment practices and in the curricula.
- Assessment of the impact of decentralizing education and training programmes on rural recruitment and retention of health professionals.
- Evaluation of the impact of inter-professional education on health professionals' practice.
- Comparative studies on the process of accreditation, using criteria such as purpose, cost, transparency, and social accountability.
- Assessment of the impact of the regulation of health professionals' education on quality and relevance of practice.
- In countries where regulation is being introduced (e.g. Francophone West Africa) or strengthened, before-and-after studies comparing quality of education, professional practice, patient safety, etc.
- Economic research on the costs of: (1) training and of utilizing existing categories of professionals; (2) options of a mix of occupations to deliver the same services with the same quality; (3) induced costs of scaling up production; and (4) fiscal space for rapid scaling up.
- Expansion of research on professions other than medicine and nursing and on low- and middle-income countries.
- Case studies of governance structures and processes.

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Annex 1.

Definition and list of health professionals

Definition of health professionals

Health professionals maintain health in humans through the application of the principles and procedures of evidence-based medicine and caring. Health professionals study, diagnose, treat and prevent human illness, injury and other physical and mental impairments in accordance with the needs of the populations they serve. They advise on or apply preventive and curative measures, and promote health with the ultimate goal of meeting the health needs and expectations of individuals and populations, and improving population health outcomes. They also conduct research and improve or develop concepts, theories and operational methods to advance evidence-based health care. Their duties may include the supervision of other health workers (adapted from ILO 2008; WHO 2010; Gupta 2011).

List of health professionals considered within the literature review

Occupations in this sub-major group are classified into several minor groups. To facilitate the development of the WHO guidelines for transforming and scaling up health professionals' education and training, the literature review will focus on the following list of health professionals, as defined by the International Standard Classification of Occupations (ISCO) (ILO 2008; WHO 2010).

Medical Doctors – both **Generalist and Specialist Practitioners**, including **Public Health Doctors** (ISCO-08 minor group 221).

Nursing Professionals, including **Public Health Nurses** (ISCO-08 minor group 222, unit 2221).

Midwifery Professionals, including **Public Health Midwives** (ISCO-08 minor group 222, unit 2222).

Dentists (ISCO-08 minor group 226, unit 2261).

Pharmacists (ISCO-08 minor group 226, unit 2262).

To simplify and streamline the literature review, this list excludes several groups under the ISCO-08 definition of health professionals, such as traditional and complementary medicine professionals (ISCO-08 minor group 223) , paramedical practitioners (ISCO-08 minor group 224), dieticians and nutritionists (ISCO-08 minor group 226, unit 2265), physiotherapists (ISCO-08 minor group 226, unit 2264), and several other therapy-related occupations.

Annex 2.

List of terms used for graduate entry programmes

Term	Definition	Source
Graduate entry programme	Usually used in reference to medical education where mature candidates with a relevant undergraduate degree (and sometimes post-graduate) gain access to the traditional medical training programme which is not necessarily accelerated. Some may require prospective candidates to sit a graduate entry test, some require science in first degree while others accept full range of non-science undergraduate degrees. These candidates generally enter into the second year of the traditional programme, the length of which varies. GEP identified as an innovative mechanism by (one or more?) medical schools in SSA for reducing the barriers to increasing quality and quantity of medical education.	Calvert 2010; Price 2010; Chen et al., 20012
Accelerated programmes	Accelerated nursing degree programme" means a programme of education in professional nursing offered by an accredited school of nursing in which an individual holding a bachelors degree in another discipline receives a BSN or MSN degree in an accelerated time frame as determined by the accredited school of nursing.	http://definitions.uslegal.com/a/accelerated-nursing-degree-program/
	An accelerated nursing programme is usually an accelerated bachelors in nursing programme. Some schools may refer to it as the BSN express. This programme is for those individuals that currently hold a bachelors degree in another discipline and would like to obtain a second bachelors degree in nursing.	http://www.nurses-neighborhood.com/accelerated-nursing-program.html
	Accelerated baccalaureate programmes offer the quickest route to licensure as a registered nurse (RN) for adults who have already completed a bachelor's or graduate degree in a non-nursing discipline.	http://www.aacn.nche.edu/media-relations/fact-sheets/accelerated-programs
RN To MSN	RN to MSN programme ideal for nurses who intend to work in the nursing field for a decade or longer. Experienced nurses who hold their Registered Nurse license (and RNs who also hold bachelor's degrees in other fields) can apply their associate degree toward the MSN without having to first earn a BSN.	
Direct entry	Direct-entry midwife: A midwife who has entered the profession of midwifery as an apprentice to a practicing midwife rather than attending a formal school programme.	http://www.medterms.com/script/main/art.asp?articlekey=40489
	Direct entry accelerated BN or MN programme: This direct-entry accelerated programme is designed for individuals who have a college degree but no nursing experience.	
Educational pathways/ Ladder programme	A means of connecting education, training, and support services to prepare students for the next level of education and training. Each step on a streamlined pathway is designed explicitly to prepare students to progress to the next level of education. (e.g., through multiple entry points and innovative program delivery mechanisms such as flexible scheduling).	

Annex 3.

Final list of PICO questions

Faculty development

PICO 1: Should health professionals' education and training institutions design and implement continuous development programmes for faculty and teaching staff relevant to the evolving health-care needs of their communities, versus not design and implement such programmes?

PICO 2: Should governments, funders and accrediting bodies support continuous development programmes for faculty and teaching staff relevant to the evolving health-care needs of their communities, versus not support such programmes?

PICO 3: Should health professionals' education and training institutions use innovative expansion of faculty, through the recruitment of community-based clinicians and health workers as educators, versus not use such expansion?

Curriculum development

PICO 4: Should health professionals' education and training institutions adapt curricula to evolving health-care needs of their communities, versus not adapt these curricula

Simulation

PICO 5: Should health professionals' education and training institutions use simulation methods of varying levels of fidelity be used in the education of health professionals versus not use simulation methods?

Direct entry of students

PICO 6: Should health professionals' education and training institutions use direct entry of graduates from relevant undergraduate, postgraduate or other educational programmes into different or other levels of professional studies, versus not use direct entry of graduates?

Admission procedures

PICO 7: Should health professionals' education and training institutions use targeted admissions policies seeking to increase the ethnic and geographical diversity of students, versus not use targeted admissions policies?

Educational pathways and ladder programmes

PICO 8: Should health professionals' education and training institutions use streamlined educational pathways, or ladder programmes, for the advancement of practicing health professionals, versus not use them?

Interprofessional education

PICO 9: Should health professionals' education and training institutions implement inter-professional education in both undergraduate and postgraduate programmes versus not implement inter-professional education?

Accreditation

PICO 10: Should national governments introduce accreditation of health professionals' education versus not introduce accreditation?

Regulation

PICO 11: Should national governemnts introduce regulations (licensure and registration) aimed to ensure the quality and relevance of care provided by health professionals, verus not introduce such regulations?

Continuous professional development-Health workers

PICO 12. Should health professionals' education and training institutions implement continuous professional development and in-service training relevant to the evolving health care needs of their communities, versus not implement them?

Annex 4.

Glossary of intervention terms

Term	Definition
Acceptability	The perception among implementation stakeholders that a given service, practice, or innovation is agreeable, palatable, or satisfactory. Acceptability should be assessed based on the stakeholder's knowledge of or direct experience with various dimensions of the intervention to be implemented, such as its content, complexity, or comfort. We refer here particularly to social acceptability, which addresses the acceptability of the intervention in the context of the culture of the society in which the users operate.
Accreditation	A particular form of quality assurance which leads to the formal approval of an institution or programme that has been found by a legitimate body to meet predetermined and agreed upon standards, eventually resulting in an accredited status granted to that provider or programme by responsible authorities. Accreditation can be awarded by an external quality assurance agency, such as in the United States, or both can be separated, as in the Dutch-Flemish accreditation system. As in the Australian system, accreditation can also be given by the institution itself, which is then "self-accrediting".
Active participation	Defines a high level of engagement in planning and proactive contribution with regard to governance and policy formation.
Active recruitment	The process of generating a pool of potential applicants (students) rather than merely tapping one, or of undertaking to favourably influence a potential student's decision to enter a programme of health professionals' education.
Adjunct faculty	Faculty hired on a part-time or temporary basis. (i.e., Any instructor teaching courses whose compensation in salary and/or fringe benefits is not equal to the compensation received by full-time contractual faculty.)
Certification	The process whereby a profession or occupation voluntarily establishes competency standards for itself. Certification plays a helpful role in protecting the public, especially in cases where the state legislatures have not opted to regulate the profession or occupation through licensure. However, there are broad variations in this voluntary process.
Competencies	A combination of the essential knowledge, abilities, skills and values necessary for the practice of health promotion.
Compulsory service	A country's law or policy that governs the mandatory deployment of health workers in remote or rural areas for a certain period of time, with the aim to ensure availability of services in these areas. It can be either imposed by the government (for positions that are under government employment), or linked to various other policies.
Continuing professional development (CPD)	Training which is beyond clinical update and includes wide-ranging competencies like research and scientific writing; multidisciplinary context of patient care; professionalism and ethical practice; communication, leadership, management and behavioural skills; team building; information technology; auditing; and appropriate attitudinal change to ensure improved patient service and research outcomes and attainment of the highest degree of satisfaction by stakeholders. CPD includes education methods beyond the didactic, embodies concepts of self-directed learning and personal development, and considers organizational and systemic factors.
Core competencies	The minimum set of competencies that constitute a common baseline for all health promotion roles (i.e. what all health promotion practitioners are expected to be capable of doing to work efficiently, effectively, and appropriately in the field).
Core curriculum	A curriculum, or course of study, which is deemed central and usually made mandatory for all students of a school or school system.
Direct admission	An admissions system which builds on previous learning experience and provides a way for individuals from relevant undergraduate, postgraduate, or other educational programs to transition into higher levels of health professionals' studies.
Feasibility	Whether or not something can be accomplished given specific conditions and criteria. Common variables suggestive of feasibility include economic cost and resources available in the area or community necessary to implement the program; organizational rules that may interfere in the implementation and carrying out of a given agenda, such as laws, ethics, and so forth; and receptivity of parallel, cooperative, or divergent agencies in the community necessary to sustain ongoing productivity of the new program.
Financial assistance	Encompassing all forms of monetary aid for students, including any grant, loan, tuition assistance, scholarships, fellowships, tax credits, savings subsidies, or other arrangement by which an entity provides or otherwise makes available monetary support to a student for undergraduate or postgraduate training.

Governance	The system, composed of structures and processes, through which faculty, administrators, and other campus constituents make collective institutional decisions. The concept of governance is meant to include not only the control of decisions about the operations of educational institutions, but also control over the decisions made regarding their objectives. Such structures might include, for example, advisory boards, governing boards, councils, boards of governors, boards of trustees, senates, or committees operating on various matters within an institution.
Infrastructure	Broadly defined as the underlying foundation or basic framework of a system or organization. We refer here specifically to material infrastructure, which includes the laboratory, office, lecture, and instrument room spaces that faculty, students and staff need for various learning activities.
In-service training	Training received while one is fully employed in the health sector. The aim is to equip health workers or the trainers of health workers with the skills to deliver specific interventions.
Inter-professional education	Faculty and students from two or more health professions engaged in learning with, from, and about each other in all components of curricula including the practical ones, to enable effective collaboration and improve health outcomes.
Joint appointment	A formalized agreement between two institutions where an individual holds a position in both institutions and carries out defined responsibilities.
Ladder programme	A system of employee salary progression that provides for advancement through a set of graded steps or levels. Progression on the ladder occurs in relation to achievement.
Licensure	The process whereby a governmental authority, in accordance with state statute, determines the competency of individuals seeking to perform certain services. Through licensure, state governments grant individuals the authority to engage in an area of practice, generally to the exclusion of others, based on demonstrated education, experience, and examination. As a general rule, state governments possess the authority to discipline licensees who fail to comply with statutes and regulations and to take action against unlicensed individuals who practice within the scope of a licensed profession or occupation.
Regulatory bodies	A national organization, external to an institution, charged with the responsibility of setting and maintaining educational and practice standards for a profession, and controlling entry into the profession (i.e. accreditation).
Research capacity	The collective capability of education faculty to conduct independent research or to contribute to interdisciplinary research.
Results-based financing	A cash payment or non-monetary transfer made to a national or sub-national government, manager, provider, payer or consumer of health services after predefined results have been attained and verified. Payment is conditional on measurable actions being undertaken.
Retention (of students)	A programme outcome involving the maintenance of a student's satisfactory progress toward his or her pedagogical objective until it is attained.
Return of service commitment	An arrangement whereby a health worker in training or a fully trained health worker enters into a contract to work for a number of years in an underserved area in exchange for a financial or in-kind incentive.
Rural population	A population of an area that is not urban in nature, where 'urban' delineates the contours of a contiguous territory inhabited at urban density levels without regard to administrative boundaries. Recognizing the absence of a universal or standardized definition of 'rural' meaningful in an international context, the diversity of definitions commonly utilized in the literature may also be accepted, based on factors including distance from nearest urban centre, population density, common nature of employment, government structures, degree of isolation, and distance from nearest 'major hospital' or high-level health care institution.
Scope of practice	The activities that an individual health professional performs in the delivery of patient care. Scope of practice reflects the types of patients for whom the health professional can care as well as what procedures/activities the health professional can perform, and influences the ability of the health professional to seek reimbursement for services provided. Determining scope of practice includes advanced practice education in a role and specialty, legal implications, and scope of practice statements as published by national professional specialty and advanced practice organizations.
Streamlined educational pathway	A means of connecting education, training, and support services to prepare students for the next level of education and training. Each step on a streamlined pathway is designed explicitly to prepare students to progress to the next level of education. (e.g., through multiple entry points and innovative programme delivery mechanisms such as flexible scheduling). Streamlined nursing education programme might, for example, ensure that registered nurses who wish to advance their nursing expertise and career by enrolling in a higher degree in nursing can do so without having to repeat the same courses and content they have already mastered; associated regulations would thus prohibit institutions from requiring a student who already holds a nursing license or relevant lower-level degree to complete coursework whose content they have already covered in a previous course of study.

Targeted admission policy	A policy that provides a number of reserved places in limited-entry undergraduate or postgraduate programmes for applicants from groups that are underrepresented and/or disadvantaged in terms of gaining access to a university education and for whom participation in the programme will assist in achieving equal educational opportunity.
Trans-professional education	Health professionals learning with, from, and about non-professional health workers, especially basic and ancillary health workers, administrators and managers, policy makers, and leaders of the local community. The intention is to break down professional silos while enhancing collaborative and non-hierarchical relationships in effective teams.
Twinning	The establishment of a formal link between a specific department/institution in a developed country and a corresponding department/institution in the developing world.
Underrepresented population	A racial or ethnic population that is underrepresented in healthcare professions relative to their numbers in the general population.
Underserved population	Interpreted in the broadest sense, a relatively poorer population inhabiting an area with limited access to qualified health care providers and health services of adequate quality. May include, for example, populations occupying the following types of settings: remote rural areas; small or remote islands; urban slum areas; areas that are in conflict or post-conflict; refugee camps; and areas inhabited by minority or indigenous groups.

Annex 5.
The WHO guideline development process

A WHO guideline is any document that contains WHO recommendations about health interventions, whether clinical, public health or policy related. A recommendation provides information about what policy-makers, health-care providers or patients should (or should not) do or consider doing. It implies a choice between different interventions that have an impact on health and that have ramifications for resource use.

Two Guideline Development Group meetings were held. The first meeting was held in Geneva, Switzerland 9-11 May 2011. Participants in the first meeting addressed and agreed on the scope, objectives, target audience, outcomes framework, categories and the potential PICO questions under each domain of the Guidelines. The group then proceeded to discuss and finalize PICO questions. A GRADE example using interprofessional education, one of the PICO questions, was presented to the group and provided the opportunity to discuss the methodology and ask questions.

The systematic reviews, evidence tables and GRADE profiles were prepared in accordance with GRADE as illustrated in Figure 5 below. 11 systematic reviews were commissioned and completed by August 2012. In addition a feasibility and acceptability survey gathered the views of 136 stakeholders and potential beneficiaries of the recommendations from all WHO regions about the acceptability and feasibility of each of the interventions being considered. A similar survey with civil society survey (169 respondents) provided views and expectations on the main areas of interest.

The second Guideline Development Group meeting was held at the Pan American Health Organization in Washington DC 20-22 March 2012. The purposes of the second meeting were as follows: review the findings from the systematic reviews and other evidence gathered; finalize decision tables and agree on the wording of draft recommendations; agree on each recommendation's direction and strength (conditional or strong); decide on next steps for finalizing the recommendations; and discuss strategies for launching and translating the recommendations into action. In the period between the two meetings, a Knowledge Gateway site was created where members of the Guideline Development Group could visit to download documents posted for comment/review by the WHO Geneva Secretariat.

WHO has followed the GRADE system for developing recommendations since 2008. The system separates the rating of the quality of the evidence from the rating of the strength of the recommendation. The quality of evidence reflects the extent of our confidence that the estimates of an effect are adequate to support a particular decision or recommendation. The GRADE system classifies the quality of evidence as high, moderate, low and very low. The GRADE framework considers the following factors when deciding on the quality of evidence: type of study design, risk of bias, imprecision, indirectness, inconsistency, publication bias, dose response, large effect size and plausible confounding.

The direction and strength of the recommendation reflects the extent to which the Guideline Development Group was confident that the desirable effects of following a recommendation are greater than the potential undesirable effects. In terms of implications, a strong recommendation can be adopted as a policy in most situations. A conditional recommendation implies the need for substantial debate and involvement of stakeholders in deciding whether or not to adopt the recommendation. In some cases, the panel may decide to qualify the conditional recommendation by providing the "conditions" under which it should be considered. Examples of these conditions include: ensuring availability of experienced staff, space or equipment, conducting needs assessment, and integrating the new intervention within existing programs. One specific type of conditions is implementing the intervention "in the context of close monitoring and evaluation". This is appropriate when monitoring of the fidelity of implementation of the intervention and evaluation of some short-term outcome can ensure optimal implementation and adaptation if necessary. Another specific type of conditions is implementing the intervention "only in the context of rigorous research". This is appropriate when there is a relatively high degree of uncertainty whether the desirable effects of following the recommendation are greater than the potential undesirable effects and the panel feels that the intervention should be adopted only when there is an opportunity to generate the needed evidence.

The Guidelines Development Group used a standardized decision table for transparently recording the panellists' judgments (Annex 7). All decisions were reached by agreement through discussion and consensus, including the direction and strength of recommendations and key considerations attached to the recommendations. Information from the evidence tables was used to develop the GRADE profiles for the final list of recommendations. The development of the Guidelines document was iterative with drafts of the Guidelines document circulated via email to the Guidelines Development Group, and then to peer reviewers for comment. Differences in points of view were resolved through email discussions. Questions and requests for clarification were also addressed prior to incorporation into the final draft.