

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 rigor, 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.