

## Monitoring the skills mix of the health workforce

### Overview

Health system planners, managers and professionals worldwide are striving to make health services more effective, efficient and equitable. In more and more cases, efforts are increasing to put people at the centre of health care. Often, this means relocating the entry point to the health system from specialized clinics, hospital outpatient departments and emergency services, to generalist ambulatory care in close-to-client settings. This, in turn, makes it all the more important to have a range of health workers with a good mix of skills. Moreover, as systems move away from focusing on a narrow offer of specialized curative care, new skills and new skills mixes are required.

### Defining and measuring skills mix of the health workforce

Skills mix is a relatively broad term which can refer to, for example, the mix of posts or occupations in the health system, the demarcation of roles and activities among different categories of staff, the combination of skills available at a specific time, or the combination of skills needed for each role within the system.

Ongoing measurement and monitoring of the skills mix of the health workforce offers a means to assess the combination of categories of personnel at given periods of time and identify possible imbalances related to a disparity in the numbers of various health occupations. Information sources with the potential to provide relevant statistics include population-based censuses and surveys with questions on labour activity and occupation, health facility assessments with staffing modules, and routine administrative records such as registries of payroll or of health professional training and licensing.

### Comparability issues

There are important challenges in clearly identifying the different categories of skills that shape workforce mix. Significant differences in levels and direction of national development and health system organization, as well as culture, lead to wide variations in the roles and tasks of health workers. Nevertheless, comparative analyses within and across countries and over time of skills mix indicators can be enhanced through the setting and use of common definitions and classifications. This includes the collection, processing and dissemination of statistical data following internationally standardized classifications, notably the International Standard Classification of Occupations (ISCO).

The ISCO classification is a framework for mapping and aggregating information on subgroups of the workforce according to assumed differences in skill level and skill specialization required to fulfill the tasks and duties of jobs. It is intended to serve as a model to facilitate communication about occupations, to enhance comparability of data on workforce mix from different contexts (whatever the structure of the health system and stage of economic development), and to make it possible for data and information on workers obtained from different sources to be produced in a form which can be useful for research as well as for decision-making and action.

Revised to include more distinctions for health occupations, the 2008 ISCO is expected to strengthen opportunities for comprehensive and comparative health workforce analyses at the national, regional and international levels.

## Selected statistics

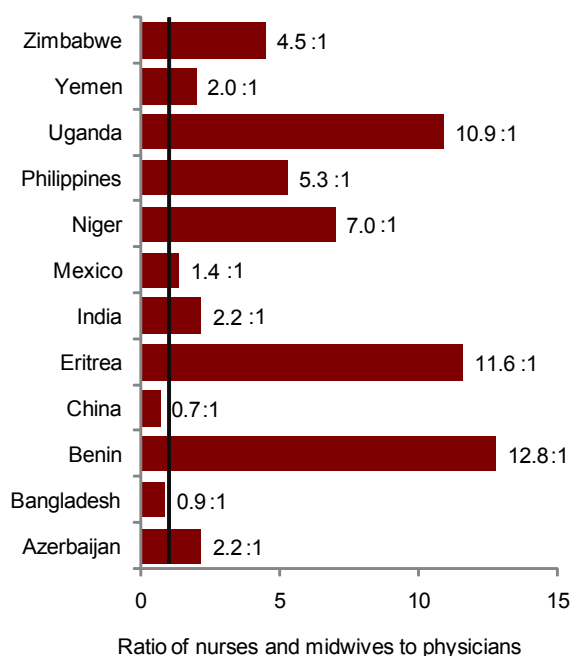
Statistics on the skills mix of the health workforce can help inform strategies to ensure the most appropriate and cost-effective combination of roles and staff. Most of the policy attention to date on using skills mix changes to improve health system performance has been on the mix between physicians versus nurses and midwives. Now, however, increasing attention is also being paid to monitoring the mix between specialist and generalist physicians, as a tracer for assessing health workforce policies by the goals of relocating the entry point to the health system from specialized services to generalist ambulatory care in close-to-client settings. However, there is no "gold standard" of what constitutes the best skills mix in a given context.

Presented here are selected statistics on the mix of medical and nursing workforces in different countries, collated from the *WHO Global Atlas of the Health Workforce* database [[www.who.int/globalatlas/autologin/hrh\\_login.asp](http://www.who.int/globalatlas/autologin/hrh_login.asp)]. To the extent possible, data on physicians and nurses are mapped to the International Standard Classification of Occupations.

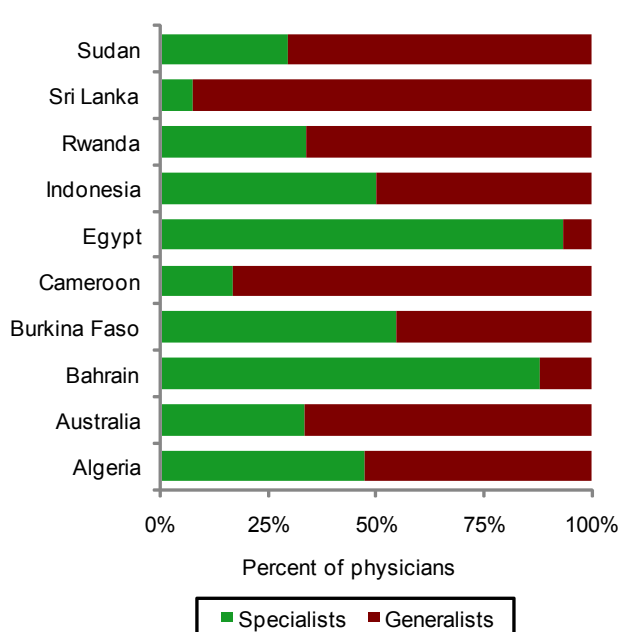
In particular, the distinctions of these health occupations are essentially defined as:

- **Generalist physicians:** those who do not limit their practice to certain disease categories or methods of treatment. They work to maintain general health and may assume responsibility for the provision of continuing and comprehensive medical care to individuals, families and communities.
- **Specialist physicians:** those who study, diagnose, treat and prevent illness, disease, injury and other physical and mental impairments using specialized testing, diagnostic, medical, surgical, physical and psychiatric techniques.
- **Nurses and midwives:** in the Global Atlas this category includes different cadres of nursing and midwifery personnel, i.e. those who provide treatment, support and care services for people who are in need of such care due to effects of ageing, injury, illness or other physical or mental impairment, or potential risks to health including before, during and after childbirth.

**Ratio of nurses and midwives to physicians, selected countries (around 2005)**



**Skills mix of the medical workforce, selected countries (around 2005)**



Source: *Global Atlas of the Health Workforce* (custom extract)

## References and related resources

- *World health report 2008 – primary health care (now more than ever)*. Geneva, World Health Organization, 2008 [[www.who.int/whr/2008/en/index.html](http://www.who.int/whr/2008/en/index.html)].
- Buchan J, Dal Poz MR. Skill mix in the health care workforce: reviewing the evidence. *Bulletin of the World Health Organization*, 2002;80:575-580 [[www.who.int/bulletin/archives/80\(7\)575.pdf](http://www.who.int/bulletin/archives/80(7)575.pdf)].
- *Determining skill mix in the health workforce: guidelines for managers and health professionals*. Geneva, World Health Organization, 2000 [[www.who.int/management/determining\\_skill\\_mix.pdf](http://www.who.int/management/determining_skill_mix.pdf)].
- *International Standard Classification of Occupations*. International Labour Organization [[www.ilo.org/public/english/bureau/stat/isco/index.htm](http://www.ilo.org/public/english/bureau/stat/isco/index.htm)]