

The need for health workforce statistics is a critical issue of concern. The required analysis for policy action must be based on timely and reliable data from relevant sources. Improved analysis and use of data lead to better health workforce policy and programme decision making, strengthened health systems and, ultimately, improved health outcomes.

## Monitoring the health workforce: measurement issues and selected tools

### Overview

Data and evidence are necessary to inform decision making among countries and other stakeholders concerning human resources for health (HRH) policy and programme planning, management, monitoring and evaluation. Despite a prevailing view that statistics on the health workforce are scarce, diverse sources that can potentially produce relevant information exist even in low and middle income countries — including population censuses and surveys, health facility assessments and routine administrative records (including records on public expenditure, staffing and payroll as well as professional training, registration and licensure).

Experience shows that the development of a comprehensive evidence base generally requires combining different types of information, frequently scattered across different sources. The starting point for any investigative exercise of the HRH situation in a given country should be a review of existing standard statistical sources, including those from outside the health sector: population statistics generated by census bureaus and statistical offices; work permits from labour departments; income files from tax departments; and others seldom used by health system planners and managers.

Where the existing data remain inadequate, the decision must be made whether to complement these sources with new data collection activities, such as a specialized HRH assessment. In considering approaches to accurately measuring a country's health workforce at a given moment, it is crucial to distinguish whether the snapshot reflects workers employed at health facilities (differentiating between those on facility duty rosters versus those actually head-counted on the day of the assessment), persons having been trained in a health-related field regardless of place of employment (for example, nurses working in a school setting), and/or persons having been trained in a health-related field regardless of current labour force status (including those who are unemployed or have left the labour force for personal reasons).

Health workers are  
"all people engaged in  
actions whose primary intent is  
to enhance health"

(World Health Report 2006).

Included are those who promote and preserve health as well as those who diagnose and treat disease. Also included are health management and support workers – those who help make the health system function but who do not provide health services directly.

Drawing upon a combination of complementary data sources, both new and existing, can result in useful and rich information for measuring and monitoring health workforce stock and flows, and the impact on health and health systems.

### Selected tools

A number of facility-based data collection tools have been developed by the World Health Organization (WHO) and other partners and used to meet a wide range of specific information needs on human resources in health systems. These include:

- The **WHO Service Availability Mapping** tool, designed to conduct a complete enumeration of all private and public health facilities via the use of district and health facility data collection modules. Availability and location of health workers are key domains of this instrument. [[www.who.int/healthinfo/systems/serviceavailabilitymapping](http://www.who.int/healthinfo/systems/serviceavailabilitymapping)]
- The **JICA Health Facility Census**, developed by the Japanese International Cooperation Agency, which includes instruments for conducting a head count of all health workers present on the day of visit.
- The **Assessment of Human Resources for Health**, developed by WHO, includes four instruments designed for collecting data at the national and institutional levels, as well as from a sample of health care providers. Domains include health workforce training, regulation, demographics, distribution, skill mix, remuneration and dual employment. The tool was initially implemented in Chad, Côte d'Ivoire, Jamaica, Mozambique, Sri Lanka and Zimbabwe. [[http://www.who.int/hrh/tools/hrh\\_assessment\\_guide.pdf](http://www.who.int/hrh/tools/hrh_assessment_guide.pdf)]
- The **Service Provision Assessment**, developed by Macro International with funding from the United States Agency for International Development (USAID). This tool can be used to collect data on current workforce versus staffing norms by means of a sample survey of health facilities. [<http://www.measuredhs.com/aboutsurveys/spa/start.cfm>]



**World Health Organization**

- The **PHRplus** survey tool, developed by Partners for Health Reformplus with funding from USAID, can be used to collect data on size, skills mix and distribution of HRH in the public health sector. Initially implemented in Nigeria, this tool can be adapted to national contexts to address deficiencies in information that health managers need for programme monitoring. [<http://healthsystems2020.org/content/resource/detail/1704/>]
- The **Facility Audit of Service Quality** rapid monitoring tool, developed by MEASURE Evaluation with funding from USAID, intended to help district- and programme-level officials design and implement a tailored facility assessment. It should be noted that this tool is not intended for use at the national level. Domains of health workforce information include staff present, staffing norms and staff qualification.

## Selected statistics

Increasing attention is being paid at the national and international levels to the need for improved information for monitoring HRH as a core parameter of health systems. At the most basic, there is a need to know how many people are working in the field of health, their characteristics and distribution. A critical aspect of the usefulness of HRH assessments to support decision-making for policy and programmes is the synthesis and presentation of appropriate data, from either new or existing sources, based on the construction of a few relevant indicators.

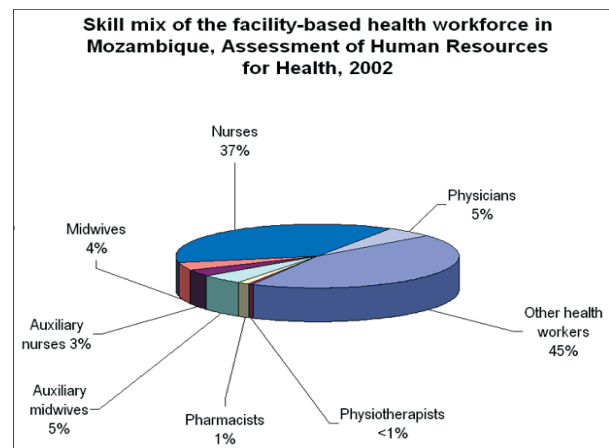
For one, measuring the skill mix of the health workforce offers a means to assess the combination of categories of personnel at a specific time and identify possible imbalances related to a disparity in the numbers of various health professions. Statistics on skill mix can help inform strategies to ensure the most appropriate and cost-effective combination of roles and staff.

Another indicator of health labour dynamics is dual employment, which occurs when an employee holds two or more paid positions in more than one location. In some contexts, this may reflect a coping strategy among health personnel to overcome unsatisfactory remuneration or working conditions in

order to fulfill professional and material expectations, in terms of seeking alternative ways to increase income by undertaking other forms of employment either after or during official working hours.

Presented here are some statistics on skill mix and dual employment as illustrative of the kinds of results compiled during the first round of the Assessment of Human Resources for Health, fielded in selected low- and middle-income countries between 2002 and 2004.

Skill mix of the facility-based health workforce in Mozambique



Percentage of health workers reporting dual employment at the time of the survey, by cadre, Chad and Mozambique

	Physicians	Nurses	Midwives	Auxiliary nurses	Pharmacists	Others	Total
Chad	52%	11%	6%	4%	57%	6%	9%
Mozambique	21%	17%	14%	12%	10%	19%	13%

## Suggested further readings

- World Health Organization, *World Health Report 2006: Working Together for Health*. Geneva, World Health Organization, 2006. [[www.who.int/whr/2006/](http://www.who.int/whr/2006/)]
- Health Facility Assessment Technical Working Group, *Profiles of Health Facility Assessment Methods*. MEASURE Evaluation and USAID, 2006. [[www.cpc.unc.edu/measure/publications/index.php](http://www.cpc.unc.edu/measure/publications/index.php)]
- World Health Organization, *A Guide to Rapid Assessment of Human Resources for Health*. Geneva: World Health Organization, 2004. [[www.who.int/hrh/tools/situation\\_analysis](http://www.who.int/hrh/tools/situation_analysis)]
- Diallo K, Zurn P, Gupta N, Dal Poz M, Monitoring and evaluation of human resources for health: an international perspective. *Human Resources for Health*, 1:3, 2003. [[www.human-resources-health.com/content/1/1/3](http://www.human-resources-health.com/content/1/1/3)]

**Next issue:** Gender and health workforce statistics