

Goal 3: Ensure healthy lives and promote well-being for all at all ages

Target 3.c: Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States

[Indicator 3.c.1: Health worker density and distribution](#)

## Institutional information

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### Organization(s):

World Health Organization (WHO)

## Concepts and definitions

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### Definition:

**Density of physicians:** The density of physicians is defined as the number of physicians, including generalists and specialist medical practitioners per 1000 population in the given national and/or subnational area. The International Standard Classification of Occupations (ISCO) unit group codes included in this category are 221, 2211 and 2212 of ISCO-08.

**Density of nursing and midwifery personnel:** The density of nursing and midwifery personnel is defined as the number of nursing and midwifery personnel per 1000 population in the given national and/or subnational area. The ISCO-08 codes included in this category are 2221, 2222, 3221 and 3222.

**Density of dentistry personnel:** The density of dentistry personnel is defined as the number of dentists, dental technician/assistants and related occupation personnel per 1000 population in the given national and/or subnational area. The ISCO-08 codes included in this category are 2261, 3214 (excluding medical prosthetic related technicians) and 3251.

**Density of pharmaceutical personnel:** The density of pharmaceutical personnel is defined as the number of pharmacists, pharmaceutical, technicians/assistants and related occupation personnel per 1000 population in the given national and/or subnational area. The ISCO-08 codes included in this category are 2262 and 3213.

### Comments and limitations:

Data on health workers tend to be more complete for the public health sector and may underestimate the active workforce in the private, military, nongovernmental organization and faith-based health sectors. In many cases, information maintained at the national regulatory bodies and professional councils are not updated.

As data is not always published annually for each country, the latest available data has been used. Due to the differences in data sources, considerable variability remains across countries in the coverage, periodicity, quality and completeness of the original data. Densities are calculated using national population estimates from the United Nations Population Division's World Population Prospects database and may vary from densities produced by the country.

## Methodology

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**Computation Method:**

Though, traditionally, this indicator has been estimated using 2 measurements: density of physicians, and density of nursing and midwifery personnel. In the context of the SDG agenda, the dataset is expanded to physicians, nursing personnel, midwifery personnel, dentistry personnel and pharmaceutical personnel. The dataset is planned to progressively move to cover all health cadres.

The method of estimation for number of physicians (including generalist and specialist medical practitioners) depending on the nature of the original data source may include practising physicians only or all registered physicians.

The figures for number of nursing and midwifery include nursing personnel and midwifery personnel, whenever available. In many countries, nurses trained with midwifery skills are counted and reported as nurses. This makes the distinction between nursing personnel and midwifery personnel difficult to draw.

The figures for number of dentistry personnel include dentists, dental technicians/assistants and related occupations. Due to variability of data sources, the professional-level and associate-level occupations may not always be distinguishable.

The figures for number of pharmaceutical personnel include pharmacists, pharmaceutical technicians/assistants and related occupations. Due to variability of data sources, the professional-level and associate-level occupations may not always be distinguishable.

In general, the denominator data for workforce density (i.e. national population estimates) are obtained from the United Nations Population Division's World Population Prospects database. In cases where the official health workforce report provides density indicators instead of counts, estimates of the stock were then calculated using the population estimated from the United Nations Population Division's World population prospects database (2015).

**Disaggregation:**

National level data

## Data Sources

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The data is compiled from routine administrative information systems (including reports on staffing and payroll as well as professional training, registration and licensure), population censuses, labour force and employment surveys and health facility assessments. Most of the data from administrative sources are derived from published national health sector reviews and/or official country reports to WHO offices.

Following the adoption of the Global strategy on human resources for health: workforce 2030 and resolution (WHA 69.19) to address human resources for health (HRH) challenges at the 69th World Health Assembly, May 2016, Member States are called on to consolidate a core set of human resources for health data with annual reporting to the Global Health Observatory, as well as progressive implementation of National Health Workforce Accounts (NHWA), to support national policy and planning and the Global Strategy's monitoring and accountability framework. Since its launch in November 2017, Member States are called to use the NHWA data platform to report health workforce data.

## Data Availability

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### Time series

Data available for 2000-2016.

## Calendar

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**Data collection:** Ongoing process

**Data release:** First quarter of 2018

## Data providers

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NA

## Data compilers

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NA

## References

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### URL:

<http://www.who.int/hrh/statistics/hwfstats/en/>

### References:

- Sixty-ninth World Health Assembly Agenda Item 16.1. Global strategy on human resources for health: workforce 2030 (2016), available from ([http://apps.who.int/gb/ebwha/pdf\\_files/WHA69/A69\\_R19-en.pdf](http://apps.who.int/gb/ebwha/pdf_files/WHA69/A69_R19-en.pdf))
- WHO (2014). Global strategy on human resources for health: Workforce 2030 ([http://who.int/hrh/resources/pub\\_globstrathrh-2030/en/](http://who.int/hrh/resources/pub_globstrathrh-2030/en/))
- "WHO Global Health Workforce Statistics." World Health Organization, n.d. Web. Feb. 2018. (<http://www.who.int/hrh/statistics/hwfstats/en/>)
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- WHO, National Health Workforce Accounts: A Handbook, n.d. Web. Feb. 2018. (<http://www.who.int/hrh/statistics/nhwa/en/>)