
Human resources for health

Global strategy on human resources for health: workforce 2030

Report by the Director-General

INTRODUCTION

1. This report summarizes progress in the implementation of the WHO Global Strategy on Human Resources for Health: workforce 2030 adopted by the World Health Assembly in resolution WHA69.19 (2016) (hereafter “the Global Strategy”) and incorporates progress in the implementation of three additional health workforce resolutions and a decision, as requested by the Health Assembly.^{1,2,3,4}

2. The report includes also activities undertaken by WHO as part of the Global Health Workforce Network⁵ and through the WHO, ILO and OECD Working for Health programme, which operationalizes the Five-year action plan for health employment and inclusive economic growth (2017–2021) through its Multi-Partner Trust Fund.⁶

Objective 1: Evidence-informed policies to optimize the workforce

3. The Global Strategy provides policy options for Member States on health workforce education, regulation, retention and skills mix optimization, among others. Member States reported on progress towards the Global Strategy’s relevant milestones through the national health workforce accounts data platform (Table 1).

¹ Resolution WHA70.6 (2017) on human resources for health and implementation of the outcomes of the United Nations High-Level Commission on Health Employment and Economic Growth.

² Resolution WHA72.3 (2019) on Community health workers delivering primary health care: opportunities and challenges.

³ Resolution WHA74.15 (2021) on Strengthening nursing and midwifery: investments in education, jobs, leadership and service delivery.

⁴ Decision WHA73(30) (2020) on Human resources for health.

⁵ For further information, see WHO Global Health Workforce Network terms of reference and 2-year workplan. Available at <https://www.who.int/publications/m/item/tor-HRH-network-approved-oct2016> (accessed 8 April 2022).

⁶ Document A74/12.

Table 1. Progress toward establishment of accreditation mechanisms for health training institutions

2020 Milestone	Disaggregation by	No. of countries that reported [N]	Responses [n (%)]		
			Yes	Partial	No
All countries have established accreditation mechanisms for health training institutions	Medical doctors	57	53 (93%)	3 (5%)	1 (2%)
	Nursing personnel	173	159 (92%)	7 (4%)	7 (4%)
	Midwifery personnel	68	57 (84%)	4 (6%)	7 (10%)
	Dentists	51	44 (86%)	3 (6%)	4 (8%)
	Pharmacists	52	44 (85%)	4 (8%)	4 (8%)

4. The Global Strategy also requires WHO to develop analyses and normative guidance on, and provide technical cooperation in, key thematic areas including occupational groups such as nurses, midwives and community health workers, and cross-cutting functions such as health workforce education, retention and gender aspects.

5. **Nursing and midwifery.** The Seventy-second World Health Assembly designated 2020 as the International Year of the Nurse and the Midwife,¹ which contributed to gathering momentum to strengthen national nursing and midwifery workforce data, allowing for the development of the first State of the World's Nursing report and the third State of the World's Midwifery report.^{2,3} To build capacity around implementation of the evidence-based policy options in the reports, the 9th Global Forum for Government Chief Nursing and Midwifery Officers was held with record participation in 2020.⁴ Global strategic directions for nursing and midwifery 2021–2025 were adopted by the Health Assembly in resolution WHA74.15 (2021), and set a clear agenda for Member States to strengthen nursing and midwifery within the Global Strategy.

6. **Community health workers.** Since 2016, stock data for community health workers have been reported on the national health workforce accounts data platform by 66 Member States, with an overall aggregate of 2.4 million based on the latest available data reported by these Member States.⁵

7. Since the launch of the guideline on community health worker programmes⁶ at the Global Conference on Primary Health Care in Astana in 2018, and the adoption of resolution WHA72.3, WHO has convened a community health worker hub in order to align and amplify dissemination, advocacy and uptake of the guideline as an integral part of the primary health care agenda. Related products have

¹ Decision WHA72(19).

² State of the world's nursing 2020: investing in education, jobs and leadership. Geneva: World Health Organization; 2020.

³ State of the world's midwifery 2021. New York, NY: United Nations Population Fund; 2021.

⁴ 2020 Triad Statement. Geneva: International Council of Nurses, International Confederation of Midwives, World Health Organization, 2020.

⁵ This cannot be considered as a global estimate, as most Member States have not reported data as yet.

⁶ WHO guideline on health policy and system support to optimize community health worker programmes. Geneva: World Health Organization; 2018 (<https://apps.who.int/iris/handle/10665/275474>, accessed 24 February 2022).

been developed to support disease control programmes,¹ and to support the roll-out of vaccines for coronavirus disease (COVID-19).² A mapping survey conducted by the African Union Commission, WHO and UNICEF contributed to the strongest-ever availability of data on community health workers.

8. **Competency-based education.** Scaling up and strengthening competency-based health worker education and training is a priority across WHO regions. To facilitate this scale-up and to identify the priority competencies, a global competency and outcomes framework for universal health coverage for programmes of 12–48 months has been developed to inform curriculum design in Member States. The framework also links to the UHC Compendium in order to ensure alignment with service package design.

9. **Regulation.** Health workforce regulation is key to define education standards, promote quality assurance, establish professional codes of conduct, identify scopes of practice, maintain systems of licensure, and establish systems for continuing professional development and appropriate disciplinary measures. New guidance is under development to provide Member States with evidence-based policy options in this domain.

10. **Retention in rural and remote areas.** Securing equitable access to health services for rural and remote populations continues to be a global challenge. The recommendations in the updated WHO Guideline on health workforce development, attraction, recruitment and retention in rural and remote areas³ provide Member States with policy options for all types of health workers in rural and remote areas.

11. **Gender-responsive workforce policies** are needed that should span entry requirements, education, deployment and management strategies. Although women comprise 67% of the global health and care workforce (noting variations across WHO regions), they hold only 25% of senior leadership positions. Guidance was developed to enhance the leadership status of women.⁴ The Gender Equal Health and Care Workforce Initiative campaigned and participated in several forums, including the United Nations Commission on the Status of Women, the Generation Equality Forum and the United Nations General Assembly. Legal instruments and policies to advance gender-responsive workforce policies have been captured in the draft Global health and care worker compact. Going forward, the Working for health action plan 2022–2030 will serve as a mechanism to advance progress within and across Member States, aligning with UN Women’s Global Acceleration Plan to Advance Gender Equality by 2026 and the UN/ILO Global Accelerator on Jobs and Social Protection.⁵

¹ Health policy and system support to optimize community health worker programmes for HIV, TB and malaria services: an evidence guide. Geneva: World Health Organization; 2021 (<https://apps.who.int/iris/handle/10665/340078>, accessed 24 February 2022).

² The role of community health workers in COVID-19 vaccination: implementation support guide, 26 April 2021. Geneva: World Health Organization; 2021 (<https://apps.who.int/iris/handle/10665/340986>, accessed 24 February 2021).

³ WHO guideline on health workforce development, attraction, recruitment and retention in rural and remote areas. Geneva: World Health Organization; 2021 (<https://apps.who.int/iris/handle/10665/341130>, accessed 24 February 2022).

⁴ Closing the leadership gap: gender equity and leadership in the global health and care workforce. Geneva: World Health Organization; 2021 (<https://apps.who.int/iris/handle/10665/341636>, accessed 24 February 2022).

⁵ Secretary-General’s Policy Brief. Investing in Jobs and Social Protection for Poverty Eradication and a Sustainable Recovery. 28 September 2021. Available at: https://www.un.org/sites/un2.un.org/files/sg_policy_brief_on_jobs_and_social_protection_sept_2021.pdf (accessed 24 February 2022).

Objective 2: Catalysing investment in health labour markets to meet population needs

12. The Global Strategy calls for concerted action in reducing health workforce shortages and related challenges in Member States.

13. With data from 194 Member States, it is estimated that there were overall 65 million health workers in 2020 (Table 2).

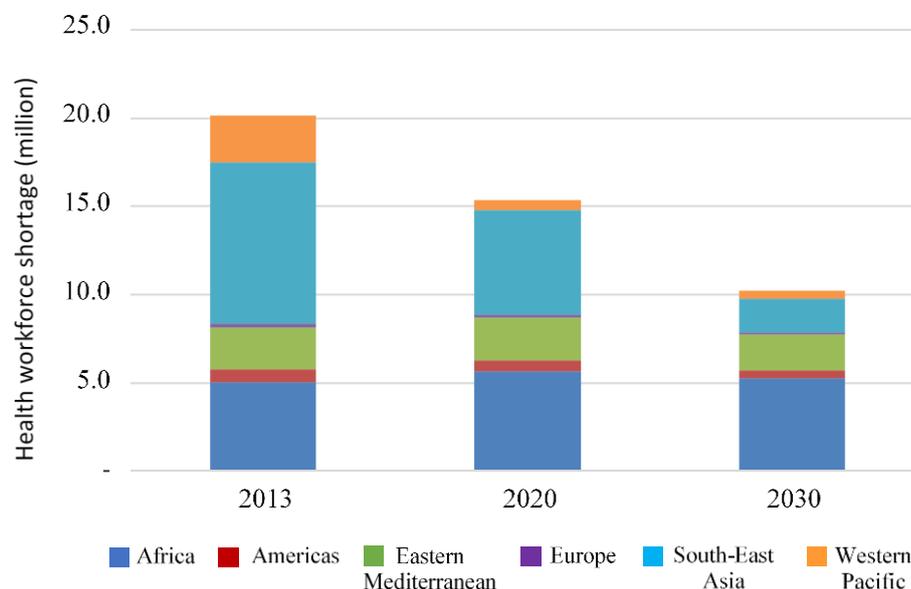
Table 2. Stock of SDG3.c health workers (medical doctors, nurses, midwives, dentists, pharmacists) in 2020 by WHO region (million)

Region	Medical doctors	Nurses	Midwives	Dentists	Pharmacists
Africa	0.3	1.2	0.3	0.04	0.09
Americas	2.5	8.3	0.1	0.6	0.6
South-East Asia	1.6	3.6	0.6	0.3	1.3
Europe	3.4	7.4	0.4	0.6	0.6
Eastern Mediterranean	0.8	1.1	0.1	0.2	0.2
Western Pacific	4.1	7.6	0.8	0.8	0.8
Global	12.7	29.1	2.2	2.5	3.7

Source: WHO national health workforce accounts, 2022

14. This stock in 2020 represents a 29% increase since 2013, when health workers were estimated to be 51 million. This is consistent with improved data availability from Member States and the predicted employment trends in the High-Level Commission on Health Employment and Economic Growth. With these updated data, the 2016 health workforce shortage estimates in the Global Strategy on Human Resources for Health were revisited, and new estimates will be published in 2022. The 2022 rounded estimates indicate a reduction in the global health workforce shortage to 15 million in 2020 and a projected global shortage of 10 million in 2030 based on current trends (mostly depicting a pre-COVID-19 situation). This is a significant decrease as compared to the earlier projection of a shortage of 18 million by 2030. However, the African and Eastern Mediterranean regions show less progress, will bear an increasing share of the total shortage in 2030 (Fig. 1) and may need to review their health labour market policies and investments.

Fig. 1. Distribution of the global health workforce shortage by WHO region in 2013, 2020 and projected shortage in 2030



15. **Health labour market analyses with Member States.** To support Member States in addressing health workforce shortages and related challenges, the Secretariat is supporting ministries of health through health labour market analyses in more than 15 countries. These analyses have been instrumental in understanding key bottlenecks, serving as a foundation for the development of national health workforce strategic plans and generating investments. Guidance on health labour market analysis has been developed¹ to facilitate the implementation of standardized approaches.

16. **Working for Health.** Within the context of the Working for Health programme, 34 countries and two regional economic areas – Southern African Development Communities (SADC) and West African Economic and Monetary Union (WAEMU) are directly supported on evidence-based decisions and multisectoral policy, planning, and investment. WAEMU countries have committed to create 40 000 new jobs by 2022, while in SADC a new regional strategy and investment plan calls for an additional 40% in workforce investments over the next 10 years.

17. **Analysing the role of international investments in human resources for health.** Despite an increase in overall official development assistance for health, for the 47 safeguard and support countries identified by WHO as having severe workforce shortages,² the availability of donor resources remains modest. Further, while health workforce has been identified as a priority area, investment in health workforce still remains a small share of health official development assistance.

¹ Health labour market analysis guidebook. Geneva: World Health Organization; 2021 (<https://apps.who.int/iris/bitstream/handle/10665/348069/9789240035546-eng.pdf>, accessed 24 February 2022).

² Health workforce support and safeguard list, 2020. Geneva: World Health Organization; 2021 (https://cdn.who.int/media/docs/default-source/health-workforce/hwf-support-and-safeguards-list8jan.pdf?sfvrsn=1a16bc6f_5#:~:text=The%202020%20Health%20Workforce%20Support,the%20World%20Health%20Asembly%20every, accessed 24 February 2022).

Objective 3: Building institutional capacity and partnerships

18. **Strengthening governance and leadership in human resources for health.** The Global Strategy emphasizes the importance of strengthening health workforce governance at national and international levels.

19. While reporting was limited on the three 2020 milestones relating to Objective 3, the majority of responding countries indicated the existence of intersectoral coordination mechanisms, human resources for health units and relevant regulatory mechanisms (Table 3).

Table 3. Progress in the establishment of governance mechanisms for human resources for health

2020 Milestones	Disaggregation by	No. of countries that reported [N]	Responses [n (%)]		
			Yes	Partial	No
All countries have inclusive institutional mechanisms in place to coordinate an intersectoral health workforce agenda.	NA	56	33 (59%)	14 (25%)	9 (16%)
All countries have a human resources for health unit with responsibility for development and monitoring of policies and plans.	NA	58	46 (79%)	8 (14%)	4 (7%)
All countries have regulatory mechanisms to promote patient safety and adequate oversight of the private sector.	Patient safety	26	16 (62%)	7 (27%)	3 (12%)
	Private sector oversight	26	16 (62%)	6 (23%)	4 (15%)

20. A 2021 multi-country analysis called for investing in human resources for health leadership, governance capacity and intersectoral coordination mechanisms to strengthen development, implementation and sustained follow-up of health workforce policies.¹

21. **Leadership and management capacity.** To address gaps in country capacity for leadership and management of human resources for health, the Secretariat is developing a prototype postgraduate course curriculum addressing the core themes of human resources for health leadership, governance and management; health labour market analysis; data for decision-making; and human resources for health education. A partnership with Health Education England is developing a curriculum blended learning programme for building workforce planning and leadership capacity, which will be made available through the WHO Academy.

22. **WHO Academy.** To support lifelong learning opportunities by health workers and health service managers in Member States, WHO has established the WHO Academy, bringing the very latest innovations in adult learning to global health through online, in-person and blended learning programmes. In September 2021, French President Emmanuel Macron joined the Director-General to hold the ground-breaking ceremony of the WHO Academy main campus in Lyon, France. Operational

¹ Martineau et al. Improving health workforce governance: the role of multistakeholder coordination mechanisms and human resources for health units in ministries of health. HRH journal. Preprint. doi: 10.21203/rs.3.rs-1199054/v1, accessed 14 March 2022.

capacity will expand during 2022 and 2023 in order to launch the Academy in 2024. In anticipation, work is under way to develop, with UNESCO, Member States and relevant experts, the international standard for the digital credentialing of lifelong learning in the health and care sector.

Objective 4: Data for monitoring and accountability

23. Three 2020 milestones relate to objective 4:

- (a) All countries are making progress on health workforce registries to track health workforce stock, distribution, flows, demand, supply, capacity and remuneration (Table 4).
- (b) All countries are making progress on sharing data on human resources for health through national health workforce accounts, and submit core indicators to the WHO Secretariat annually.
- (c) All bilateral and multilateral agencies have participated in efforts to strengthen health workforce assessments and information exchange in countries.

24. **Capacity of health workforce information systems.** In parallel to the overall strengthening of health information systems, as called for in the Thirteenth General Programme of Work, 2019–2023, the specific requirements for a multisectoral, cross-government engagement on education, employment and migration within the health and care sector is essential.

Table 4. Progress towards the 2020 milestone on health workforce data tracking

2020 Milestone	Disaggregation by	No. of countries that reported [N]	Responses [n (%)]		
			Yes	Partial	No
All countries are making progress on health workforce registries to track health workforce stock, distribution, flows, demand, supply, capacity and remuneration	Outputs from education and training institutions	55	29 (53%)	10 (18%)	16 (29%)
	Entrants to labour market	54	25 (46%)	16 (30%)	13 (24%)
	Active stock in labour market	54	27 (50%)	14 (26%)	13 (24%)
	Exits from labour market	54	23 (43%)	16 (30%)	15 (28%)
	Location of health facilities	54	31 (57%)	9 (17%)	14 (26%)

25. **National health workforce accounts.** Since the launch of the national health workforce accounts platform in November 2017, the number of Member States with nominated focal points has risen from 0 to 166, as at January 2022. The primary purpose of national health workforce accounts is to strengthen national and subnational policy and planning. The WHO Secretariat provides capacity-building and technical support for strengthening health workforce information systems and their use in national health workforce planning, management and monitoring.

26. Health workforce data availability has nearly trebled since the launch of the Global Strategy, with stock data reported by all WHO Member States for medical doctors and for nurses (Table 5). For midwives, dentists and pharmacists, the number of countries reporting is above 90%.

Eighty two countries reported on more than 15 other health workers occupations. The level of disaggregation by age, gender, education and other factors has also increased.

Table 5. Overview of data availability for five health workers occupations (medical doctors, nurses, midwives, dentists, pharmacists) among the 194 WHO Member States

Occupation	Medical doctors	Nurses	Midwives†	Dentists	Pharmacists
Number of countries with stock data	194	194	122	192	187
Number of countries with data in the past five years*	171	178	110	171	146
Number of countries with graduates data	78 (mostly European region 48)	123	105	74 (mostly European region 48)	79 (mostly European region 48)
Number of countries with age disaggregation	119	129	81	37	47

* At least one data point reported for the period 2016–2020.

† Excluding 50 countries for which number of midwives are included in the count of nursing personnel.

27. **Inter-agency data exchange.** To strengthen health workforce assessment and information exchange, ILO, OECD and WHO established in May 2019 the Inter-Agency Data Exchange. The three organizations collaborate to strengthen country capacity, partnerships and mechanisms for improved availability, analysis, dissemination and use of health workforce data.

Health workforce in the COVID-19 pandemic

28. **COVID-19 impact on health and care workers** included the risk of infection and deaths (approximately 115 000¹ between January 2020 and May 2021), mental health conditions, industrial action and strikes related to deteriorating working conditions.

29. **Policy, management and investment decisions to respond to the pandemic** entail guaranteeing decent working conditions, including occupational health and safety and a manageable workload, the implementation of infection prevention and control measures, including provision of adequate personal protective equipment, mental health and psychosocial support. In parallel, strengthening the capacity and optimal management of health workforce teams, mobilizing additional health workers, and rationalizing deployment and distribution are required² to scale up health workforce to respond to increased demand.³ The COVID-19 vaccination campaign requires redeployment and hiring of additional health workers. Tools were developed to estimate health workforce requirements for

¹ The impact of COVID-19 on health and care workers: a closer look at deaths. Geneva: World Health Organization; 2021 (<https://apps.who.int/iris/bitstream/handle/10665/345300/WHO-HWF-WorkingPaper-2021.1-eng.pdf>, accessed 25 February 2022).

² Health workforce policy and management in the context of the COVID-19 pandemic response: interim guidance. Geneva: World Health Organization; 2020 (https://www.who.int/publications/i/item/WHO-2019-nCoV-health_workforce-2020.1, accessed 25 February 2022).

³ WHO 2020. Surge planning tools. Copenhagen: World Health Organization Regional Office for Europe; 2020 (<https://www.euro.who.int/en/health-topics/Health-systems/pages/strengthening-the-health-system-response-to-covid-19/surge-planning-tools>, accessed 14 March 2022).

COVID-19 vaccination.¹ Factoring in these requirements in short- and medium-term workforce needs and resource allocation decisions is essential for a sustainable response to the pandemic, while avoiding an over-reliance on re-deployment and minimizing disruptions to the provision of essential health services.²

30. Supporting policy dialogue and technical cooperation on health workforce and COVID-19. The unprecedented challenges posed by the pandemic led to dedicated technical cooperation activities in more than 100 countries and territories targeting health workforce implications and requirements of the pandemic response across various thematic areas.

CONCLUSION

31. Available data and evidence point towards a reduction in the estimated global health workforce shortage to 15 million in 2020, and a projected decline to 10 million by 2030. The impact of the COVID-19 pandemic on these trends will need to be monitored, and any risk that the gains may be reversed must be acted upon. In parallel, the policy and governance milestones of the Global Strategy provide an indication of progress in the institutionalization of policies and mechanisms for the effective management of the health workforce agenda.

32. The Secretariat is advancing a substantial body of evidence and normative and technical cooperation work across a range of human resources for health functions to support Member States.

ACTION BY THE HEALTH ASSEMBLY

33. The Health Assembly is invited to note this report and to encourage all Member States to continue in their efforts to implement, as relevant to their context, the provisions of the Global Strategy and the related resolutions; and to report their national data on human resources for health through the national health workforce accounts online platform.

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¹ COVID-19 Vaccine Introduction and deployment Costing tool (CVIC tool). Version 2.2. Geneva: World Health Organization; 2021 (https://www.who.int/publications/i/item/who-2019-ncov-vaccine_deployment_tool-2021.1, accessed 25 February 2022).

² Maintaining essential health services: operational guidance for the COVID-19 context, interim guidance, 1 June 2020. Geneva: World Health Organization; 2020 (https://www.who.int/publications/i/item/WHO-2019-nCoV-essential_health_services-2020.2, accessed 25 February 2022).