

Planetary health benefits from strengthening health workforce education on the social determinants of health

Nicole Valentine^{1,†}, Onyema Ajuebor^{2,*,‡}, Julian Fisher³, Patrick Bodenmann⁴, Fran Baum⁵, and Kumanan Rasanathan⁶

¹Social Determinants of Health Department, World Health Organization, Switzerland

²Health Workforce Department, World Health Organization, Switzerland

³Department of Oral Diagnostics, Digital Health and Health Services Research, Charité-Universitätsmedizin Berlin, Germany

⁴University Center of Primary Care and Public Health (Unisanté), University of Lausanne, Switzerland,

⁵Stretton Institute, University of Adelaide Australia and

⁶Social Determinants of Health Department, World Health Organization, Switzerland

*Corresponding author. Email: ajueboro@who.int

†Equal first authors.

Summary

Social inequalities are perpetuating unhealthy living and working conditions and behaviours. These causes are commonly called ‘the social determinants of health’. Social inequalities are also impacting climate change and vice-versa, which, is causing profound negative impacts on planetary health. Achieving greater sustainability for human and planetary health demands that the health sector assumes a greater leadership role in addressing social inequalities. This requires equipping health and social care workers to better understand how the social determinants of health impact patients and communities.

Integration of the social determinants of health into education and training will prepare the workforce to adjust clinical practice, define appropriate public health programmes and leverage cross-sector policies and mechanisms being put in place to address climate change. Educators should guide health and social workforce learners using competency-based approaches to explore critical pathways of social determinants of health, and what measurements and interventions may apply according to the structural and intermediary determinants of health and health equity.

Key institutional and instructional reforms by decision-makers are also needed to ensure that the progressive integration and strengthening of education and training on the social determinants of health is delivered equitably, including by ensuring the leadership and participation of marginalized and minority groups. Training on the social determinants of health should apply broadly to three categories of health and social workforce learners, namely, those acting on global or national policies; those working in districts and communities; and those providing clinical services to individual families and patients.

Keywords: social determinants of health, health workforce education, climate change, planetary health.

EQUIPPING THE HEALTH WORKFORCE TO ADDRESS THE SOCIAL DETERMINANTS OF HEALTH

This decade, the world is facing structural environmental and socioeconomic challenges. Together, these fundamental challenges, overlaid with wars and conflicts, as well as increased pandemic risks, will shape population health, the structure and function of the Earth’s

natural systems, and the trend of growing economic and health inequities. The health and social care workforce (health workforce) can play a vital role in tackling these challenges ([WHO Commission on the Social Determinants of Health, 2008](#); [WHO, 2021b](#)). Over a decade ago, the World Health Organization’s (WHO) global Commission on Social Determinants of Health recommended the development of a health workforce ‘that is trained in the social determinants of health’

(WHO Commission on the Social Determinants of Health, 2008) and in an understanding of how health inequities are created. Since then, the knowledge on social determinants and health equity has expanded, as has the evidence on the health impacts of environmental pollution that are damaging simultaneously population and planetary health. While the Commission's main recommendations are still relevant today, there is little sign that the Commission's central messages on the actions needed to promote population health and reduce health inequities have been well implemented. On the contrary, health inequities are increasing in many instances and life expectancies are declining in some countries (Vos *et al.*, 2020). While the problem of increasing health inequities cannot solely be blamed entirely on poor education and training on the social determinants of health and health equity, having a well-trained health workforce is essential if we are to realize the Commission's goal of closing the health inequities gap in a generation.

The rise of health inequities and the growing threat to the health of our planet and to human health are interconnected and interdependent. The concept of planetary health is based on the understanding that human health and human civilization depend on flourishing natural systems and the wise stewardship of those natural systems. However, natural systems are being degraded to an extent unprecedented in human history (Intergovernmental Panel on Climate Change, 2022). Population health relies on promoting action on the social determinants of health, health security and Universal Health Coverage. Income inequalities affect each of these areas. Worryingly for inequalities (Sustainable Development Goal 10.1), the share of the total income of the bottom 40% has been growing at a slower rate than the income share of the top 10% (Oldiges and Nayyar, 2022). Health inequities are a signpost to broader social inequities and their historical legacy, with climate change exacerbating existing health and social inequities. The health sector must adopt a pro-active leadership role in promoting health and drive intersectoral collaboration for lasting solutions to the climate crisis and growing inequities.

There is much to be done to orient the education and training of the health workforce to ensure that health services are more comprehensive, responsive, integrated and accessible and coordinated to address the diverse range of health threats facing humanity (WHO, 2015). Biomedical models form the basis of this training, which focuses largely on diseases and their cure for individuals, to the exclusion of the socio-political context within which they arise. Training can be made more effective through recognizing the impact of social inequities on the patterning of disease and health promotion. (Fennig and Denov, 2019). The grand

challenge is: first, for faculty and students to gain a deep understanding of the need to balance the current focus on individual minds and bodies, with the social, economic and physical environments in which people live, and in which health and equity can be achieved. This may require curricula adaptation. Second, for them to proceed to jobs and careers within the health and other sectors that enable them to respond to the social determinants of health to advance health equity and environmental sustainability and climate justice.

THE SOCIAL DETERMINANTS OF HEALTH AT THE CENTRE OF TODAY'S HEALTH SYSTEM

The epidemiological evidence that shaped the social determinants of health and health equity framework summarizes how different aspects of our environment and histories affect health exposures, behaviors and equity in outcomes. The social determinants of health are the non-clinical factors that influence health outcomes (WHO, 2021d). They are the conditions in which people are born, grow, work, live, and age, their access to power, money and resources, and the wider set of forces and systems shaping the conditions of daily life (the latter group is referred to as 'structural' social determinants of health inequities). Yet they have not been, and continue not to be adequately prioritized by policymakers, administrators and curriculum developers for pre-service education and in-service training programmes for health workers. The COVID-19 pandemic has renewed attention to the social determinants of health and health inequity. The extent of inequities has been laid bare by the pandemic and the profound implications of people's social and economic conditions on their ability to follow public health advice have been evident globally (Paremoer *et al.*, 2021). Following the pandemic, it is clear that social determinants of health have worsened for many, threatening to stall progress against the spread and impact of the virus, particularly in settings where public health and social measures have not been adequate (Paremoer *et al.*, 2021; WHO, 2021c). Achievement of the SDGs has also been threatened by the pandemic (Baum *et al.*, 2022).

It is vital that health workers and leaders are aware of the broader interactions between society, the provision of sustainable health services, and their combined influence on health and equity. Also, many of the important actions to address the environmental threats to the planet's ecosystems and human civilization are the same that are needed to enhancing equity in human health and development. In this regard, the same issues related to imbalances in the distribution of power, money and resources, shape the decisions of millions

to use and develop renewable energy options or cast them aside. This is particularly true for air pollution. Several steps can be taken by health actors to address harmful environmental trends including by reducing their own carbon footprint. Beyond that, health actors can promote science, education and training that link equity and sustainability issues. The United Nations 2030 Agenda for Sustainable Development provides a platform and framework for collaboration across key dimensions of sustainable development and planetary health (including climate actions) that can allow for leveraging the inputs and outcomes of education and training activities in a manner that is consistent, coherent and mutually reinforcing (United Nations, 2015). The platform has established an umbrella under which coalitions of policy-makers for climate justice can be built, including through orchestrating a Planetary Health and Health in All Policies approach, which is used to address the social determinants of health.

A health system that is capable of developing reflective practices that can link diagnoses and contexts more concretely with feasible prescriptions for improving health, will require health workers to adapt their understanding of new knowledge. For instance, they will need to understand the impacts of over-reliance on non-renewable energy resources and the ways in which health equity and planetary health considerations are interlinked. The lack of understanding of these issues has helped create the ideal conditions for the current non-communicable diseases (NCDs) global epidemic. The NCDs themselves are not rooted primarily in individual choices but rather, in the way we plan our cities, promote huge agribusinesses rather than small-scale farmers and encourage the promotion of ultra-processed foods rather than healthy traditional options. Structural determinants behind these factors include weak investments in public education, infrastructure and services, unaccountable market mechanisms with unfair labour practices and promotion of consumerism values at the expense of population health and climate. The health sector can play a major role by promoting action on social determinants of health to enable patients and communities to have the resources and environments to enable healthier behaviours (Paremoor *et al.*, 2021).

ACHIEVING THE PARADIGM CHANGE: WHAT WILL IT ENTAIL FROM AN EDUCATION AND TRAINING PERSPECTIVE?

The availability of competent, supported and motivated health workers is key for the optimal functioning and performance of health systems. In this article,

we argue that education and training have a key role to play in strengthening the actions of health workers towards addressing social determinants of health, reducing inequities and achieving the SDGs. For educators and providers of health learning programmes, it is important to note several principles that come into play to shape impactful learning for addressing social determinants. Analysis of critical pathways that encompass social contexts, layers of determinants and policy spectra in explaining the causation of health inequities is an important approach to address health equity through education and training (see Figure 1).

Educators should guide their learners in exploring these critical pathways in daily life, and how these can offer avenues to discuss or analyze problematic health areas. They can also encourage learning about what measurements and interventions may apply according to the structural and intermediary determinants of health that are relevant to their settings (WHO, 2022). For example, this might include consideration of a planetary health boundaries monitoring framework, frameworks to measure climate hazards and the disease conditions they are associated with, or the commercial determinants of health (understood as ‘the conditions, actions and omissions by corporate actors that affect health’ (WHO, 2021a)), and how they shape unhealthy food systems. The organization of these learning pathways should also consider the role of the life course in shaping social determinants and health outcomes, and how to create or target the best entry points and interplay of mechanisms to maintain or improve health and equity (Committee on Educating Health Professionals to Address the Social Determinants of Health, 2016). Also important is the application of systems thinking approaches and transformative education principles—which are based on social justice and human rights values (Frenk *et al.*, 2010). Together, these principles incorporate the values of equity, ecological sustainability and fairness needed to realize the sustainable development agenda across societies.

Implementing effective education and training strategies requires institutional capacity, including adequate infrastructure, equipment and competent faculties. These elements need to be supported by quality regulatory mechanisms (Task Force on Scaling Up Education and Training, 2008). Further, there should be coordinated approaches to link health worker education strategies to workforce development (Pálsdóttir *et al.*, 2017), including through the selection of an adequate and gender-balanced pipeline of trainees from rural and remote areas (Boelen *et al.*, 1995). Workplace efforts should also ensure the prioritization and participation of other marginalized groups, in particular indigenous peoples, ethnic minorities, people with disabilities and those from less advantaged family backgrounds,

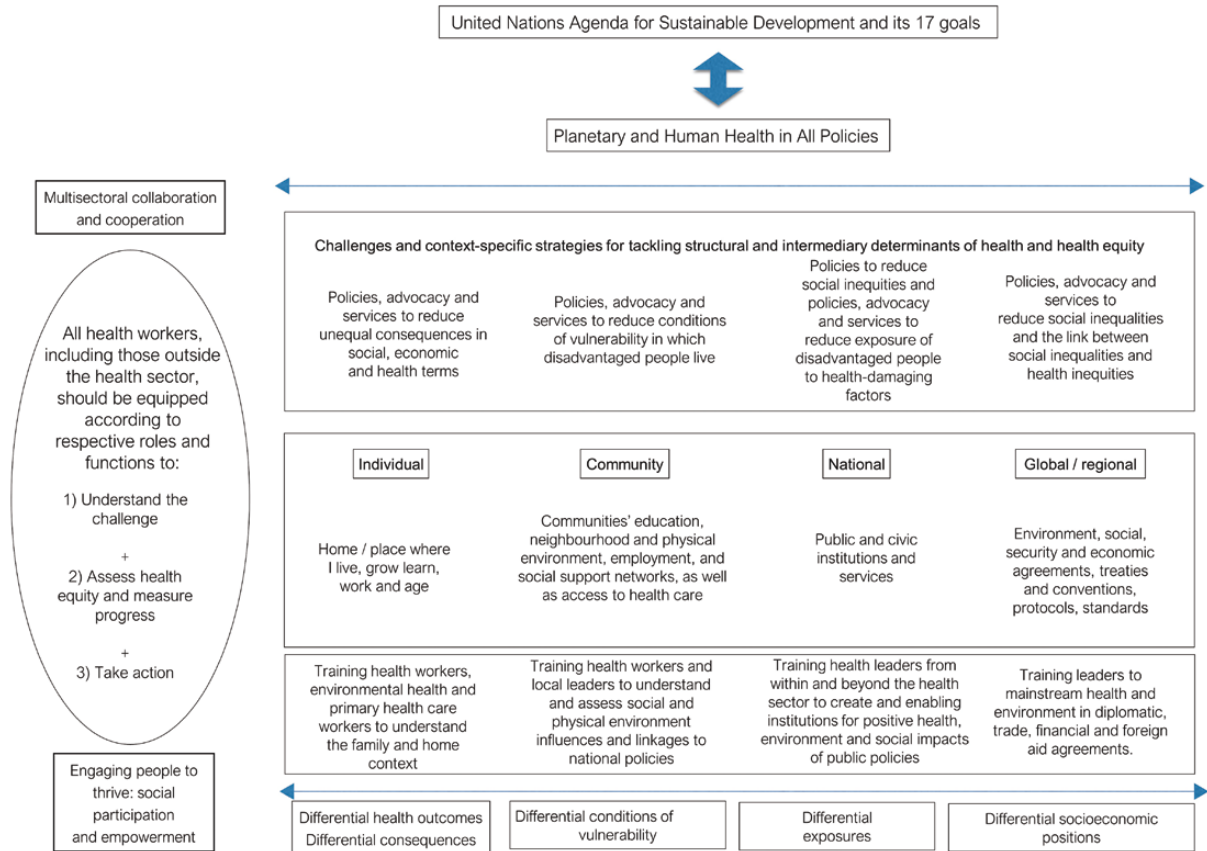


Fig. 1: Integrating the social determinants of health in education and practice.

irrespective of their sexual identity. Retaining health workers will be best assured by fostering decent employment conditions, thus optimizing health worker motivation, satisfaction, distribution and performance as outlined in the International Labour Organization and United Nations social protection floor (ILO, 2011). Institutional reforms should be coupled with instructional reforms and rely on enabling actions to provide an education that is truly transformative. Instructional reforms include but are not limited to the following:

- 1) Adopt competency-driven approach to curriculum development and teaching,
- 2) Promote inter- and transprofessional education,
- 3) Enhance collaborative and non-hierarchical relationships in teams,
- 4) Exploit the power of technology for lifelong learning while minding the digital divide,
- 5) Strengthen faculty development,
- 6) Adopt the 'competence model' as a measure of professional ability and the classification of health professionals,

- 7) Embed social accountability and gender mainstreaming in institutional and professional values,
- 8) Commit adequate budgetary resources for high quality education and training and ensure that fiscal budgets and macroeconomic financing arrangements (including loans) properly account for these investments.

These instructional reforms can be implemented in institutions and programmes that cater to the full gamut of health workers, including clinicians, public health workers, community health workers and relevant non-health sector professionals directly impacting health risks, such as urban/town planners and environmental impact assessors. Noting the diversity of circumstances and the complexity of addressing the social determinants of health, training to improve practice and actions must be context-specific and relevant to health worker roles and levels of competence (WHO, 2022). Three overlapping levels of training interventions can be identified thus:

- a) Training global, regional and national Planetary Health and Health in All Policies leaders and champions. Learners at this level should be prepared to create policy coherence for sustainable development and improvement in population health and equity including addressing the inequitable distribution of power, money and resources.
- b) Training district and community administrators and managers, public health professionals, clinical actors and the social care workforce, environmental health workers and workers in non-health sectors. Learners at this level should be prepared to evaluate and address intermediary social determinants of health. They should also be able to identify community-identified needs and strengthen community assets to improve daily living conditions.
- c) Training clinicians, social care workers and community health workers, as well as workers in non-health sectors who primarily interact with individuals and families. Learners at this level should be prepared to evaluate and address intermediary social determinants of health to improve daily living conditions, and support and undertake measures to provide integrated people-centred health and social services.

Two examples of training courses are shown in **Boxes 1** and **2**. **Box 1** describes a short innovative course that aims to integrate training on planetary health and social determinants of health into health worker education and training. The second example emphasizes an interrogation of the social context as part of the training of medical doctors.

In conclusion, there is increasing realization in research and policy circles of the synergistic links between a flourishing planet, equity and good human health. The social determinants of health are at the nexus of these interlinkages. The COVID-19 pandemic, increasing frequency of catastrophic climate disasters and greater social unrest owing to inequities demonstrate that all sectors in society are implicit and have a role to play. The health sector's intervention is however of utmost importance because it has a stewardship role in protecting and promoting health ([Baum *et al.*, 2009](#)). Given this position, governments and the international community should ensure that deliberate steps are taken to strengthen the institutional structures and instructional reforms that foster the ability of health workers including those from sectors outside health, to address these challenges to secure a healthier, more sustainable and more equitable future for all.

Box 1: Lifelong learning: a key enabler for addressing social determinants of health, and taking action for planetary health

Since 2021, the two-and-a-half month advanced module on the social determinants of health and planetary health - designing interventions for sustainable livelihoods, has been organized each year by the Institute of Tropical Medicine and International Health, which is part of the tropEd; an international network of member institutions or higher education in international/global health from Europe, Africa, Asia, Australia and Latin America.

The module is action orientated encouraging participants to translate and apply knowledge in real world scenarios. It discusses the idea of 'wicked problems' (the social determinants of health) and 'wicked solutions' (UN 2030 Agenda for Sustainable Development), reinforcing the interdependent and inseparable nature of concepts such as Planetary Health with the conditions people are born, live, work, grow and age i.e. the social determinants of health.

Issues of power and the wider set of forces and systems shaping the conditions of daily life are used to discuss and reflect on the different perspectives of social participation including participation from a human rights perspective, as well as the concepts and practice of citizen-led accountability. It uses policy coherence for sustainable development to develop 'planetary health and health in all policy approaches', with a focus on the active and meaningful engagement of local communities in policy development. The hybrid format of learning allows for learners from around the world to learn with and from each other, share their work, projects and experiences to co-create new knowledge.

The module places an emphasis on lifelong learning as a key enabler for promoting health equity through action on both the social determinants of health and the social determinants of lifelong learning. Participants are encouraged to keep a lifelong learning diary to document their own learning journey.

The module is establishing an extensive alumni network, who are able to provide support and mentoring, ad return as teachers in subsequent courses.

Source: Julian Fisher, Department of Oral Diagnostics, Digital Health and Health Services Research, Charité-Universitätsmedizin Berlin, Germany.

Box 2: Defining the social context: teaching the social determinants of health as part of holistic continuous professional development for physicians

The course 'Defining the social context' was established almost 20 years ago and is integrated in an overall programme on transcultural clinical skills at the Centre of Primary Care and Public Health. The social determinants of health course is the second of four courses. The other components of the programme address language and literacy barriers; beliefs, stereotypes and unconscious biases; and engaging in negotiation with patients.

Participants acquire knowledge, skills and competencies enabling them to better integrate aspects of social determinants into their daily clinical practice, including through the provision of tools and resources in the clinical context to help address the social and environmental factors impacting patients' health.

This training programme aims to engage health workers at different levels of public service (policy-makers, health managers and clinicians) and to strengthen interdisciplinary academia formal and informal networks. As such, it provides a practical link between clinical practice and broader Health in All Policies capacity development and advocacy. The role of advocacy is extremely important for ensuring the engagement of clinicians in civic movements for fairer societies with essential conditions for health equity. To ensure the continuous education programme is relevant to physicians, a range of teaching methods is used, including the use of audio-visual aids, the use of vignettes describing situations confronting clinicians when treating patients as regards the social determinants of health, including learning from simulation (Paroz et al., 2016) and the study of real clinical cases.

Source: Patrick Bodenmann, University Center of Primary Care and Public Health (Unisanté), University of Lausanne, Switzerland.

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REFERENCES

- Baum, F. E., Bégin, M., Houweling, T. A. J. and Taylor, S. (2009) Changes not for the fainthearted: reorienting health care systems toward health equity through action on the social determinants of health. *American Journal of Public Health*, 99, 1967–1974.
- Baum, F., Paremoer, L., Flavel, J., Musolino, C. and Labonte, R. (2022) Can the world become a place where the planet and all people flourish after the pandemic? *BMJ*, 377, e067872.
- Boelen, C., Heck, J. E. and World Health Organization. (1995) *Defining and Measuring the Social Accountability of Medical Schools*. World Health Organization, Geneva.
- Committee on Educating Health Professionals to Address the Social Determinants of Health. (2016) *A Framework for Educating Health Professionals to Address the Social Determinants of Health*. National Academies Press, Washington, DC. <https://www.nap.edu/catalog/21923>.
- Fennig, M. and Denov, M. (2019) Regime of truth: rethinking the dominance of the bio-medical model in mental health social work with refugee youth. *British Journal of Social Work*, 49, 300–317.
- Frenk, J., Chen, L., Bhutta, Z. A., Cohen, J., Crisp, N., Evans, T., et al. (2010) Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. *Lancet*, 376, 1923–1958.
- ILO. (2011) *Social Protection Floor for a Fair and Inclusive Globalization. Report of the Advisory Group chaired by Michelle Bachelet Convened by the ILO with the collaboration of the WHO*. International Labour Organization, Geneva. https://www.ilo.org/global/publications/books/WCMS_165750/lang--en/index.htm (last accessed 31 May 2022).
- Intergovernmental Panel on Climate Change. (2022) *Climate Change 2022: Mitigation of Climate Change. Working Group III Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Summary for Policymakers*. https://report.ipcc.ch/ar6wg3/pdf/IPCC_AR6_WGIII_FinalDraft_FullReport.pdf (last accessed 31 May 2022).
- Oldiges, C. and Nayyar, S. (2022) *The Inequality Gap: The Bottom 40 Percent may be Further away than we Thought*. United Nations Development Programme; Development Futures Series, New York.
- Pálsdóttir, B., Cobb, N., Fisher, J. et al. (2017) Enabling universal coverage and empowering communities through socially accountable health workforce education. In Buchan, J., Ibadat, S. D., and Campbell, J. (eds), *Health Employment and Economic Growth: An Evidence Base*. World Health Organization
- Paremoer, L., Nandi, S., Serag, H. and Baum, F. (2021) Covid-19 pandemic and the social determinants of health. *BMJ*, 372, n129.
- Paroz, S., Daele, A., Viret, F., Vadot, S., Bonvin, R. and Bodenmann, P. (2016) Cultural competence and simulated patients. *The Clinical Teacher*, 13, 369–373.
- Task Force on Scaling Up Education and Training. (2008) *Scaling Up, Saving Lives*. Global Health Workforce Alliance, Geneva.
- United Nations. (2015) *Transforming our World: the 2030 Agenda for Sustainable Development*. New York. <https://sustainabledevelopment.un.org/content/documents/21252030> Agenda for Sustainable Development web.pdf (last accessed 31 May 2022).

- Vos, T., Lim, S. S., Abbafati, C., Abbas, K. M., Abbasi, M., Abbasifard, M., *et al.* (2020) Global burden of 369 diseases and injuries in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. *The Lancet*, 396, 1204–1222.
- WHO Commission on the Social Determinants of Health. (2008) *Closing the Gap in a Generation: Health Equity Through Action on the Social Determinants of Health*. World Health Organization, Geneva.
- World Health Organization. (2015) *WHO Global Strategy on People-centred and Integrated Health Services: Interim Report*. World Health Organization, Geneva. [cited 2021 Oct 12]. Report No.: WHO/HIS/SDS/2015.6. <https://apps.who.int/iris/handle/10665/155002> (last accessed 31 May 2022).
- World Health Organization. (2021a) *Factsheet on Commercial determinants of health*. <https://www.who.int/news-room/fact-sheets/detail/commercial-determinants-of-health> (last accessed 31 May 2022).
- World Health Organization. (2021b) *COP26 Special Report on Climate Change and Health: The Health Argument for Climate Action*. World Health Organization, Geneva. [cited 2021 Nov 4]. viii, 71 p. <https://apps.who.int/iris/handle/10665/346168> (last accessed 31 May 2022).
- World Health Organization. (2021c) *COVID-19 and the Social Determinants of Health and Health Equity: Evidence Brief*. World Health Organization, Geneva. <https://apps.who.int/iris/rest/bitstreams/1389412/retrieve> (last accessed 31 May 2022).
- World Health Organization. (2021d) *Social Determinants of Health*. [cited 2021 Oct 12]. https://www.who.int/health-topics/social-determinants-of-health#tab=tab_1 (last accessed 31 May 2022).
- World Health Organization. (2022) *Global Competency Framework for Universal Health Coverage*. World Health Organization, Geneva. <https://apps.who.int/iris/rest/bitstreams/1415843/retrieve> (last accessed 31 May 2022).