

SYNTHESIS PAPER OF THE THEMATIC WORKING GROUPS

HEALTH WORKFORCE 2030

Towards a global strategy on
human resources for health



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ABBREVIATIONS

GDP	gross domestic product
GHWA	Global Health Workforce Alliance
HRH	human resources for health
ICT	information and communications technology
ILO	International Labour Organization
ISCO	International Standard Classification of Occupations
OECD	Organisation for Economic Co-operation and Development
WHO	World Health Organization

BACKGROUND

In 2013 the Board of the Global Health Workforce Alliance (GHWA) decided to facilitate the development of forward-looking strategic thinking on human resources for health (HRH). This synthesis paper was developed as a result of a broad-based consultation process, and it captures the evidence and recommendations from the papers produced by eight thematic working groups (1). The preliminary drafts of the papers were discussed at the GHWA Board meeting in July 2014, and presented at the third Global Symposium on Health Systems Research in Cape Town, South Africa (October 2014). A public hearing on the draft thematic papers was held between 24 September and 30 November 2014, as a result of which over 20 submissions were received from international agencies, professional associations, networks and civil society groups; collective submissions were also made as a result of consultation opportunities held at conferences. The GHWA Secretariat produced this analytical synthesis of the thematic papers and the comments received on them. After a further public consultation process, the GHWA Board adopted it at its eighteenth meeting on 25–26 February 2015.

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Executive summary: a strategic vision for the health workforce in the 21st century

The health workforce will be critical to achieving health and wider development objectives in the next decades. The United Nations Secretary-General has launched a call to action to people and leaders across the world in support of a truly transformative agenda beyond 2015 in order to ensure a life of dignity for all (2). The Board of the GHWA has risen to this challenge, recognizing that the health targets under consideration in the proposed sustainable development goals, including a renewed focus on equity and universal health coverage, will only be attained through substantive and strategic investments in HRH. The Ebola crisis has also demonstrated how global health security hinges on a fit-for-purpose health workforce and resilient public health systems.

The foundations for a strong and effective health workforce able to respond to the priority needs of the 21st century require matching today's supply of professionals with the demands of tomorrow's populations. The ongoing challenges of health workforce deficits and imbalances, prevalent in countries at all levels of socioeconomic development, combined with ageing populations and epidemiologic transformations, require the global community to reappraise and re-evaluate the effectiveness of past efforts on the health workforce, and instil these lessons in a new, contemporary agenda on HRH. In parallel, there is an opportunity to ensure that much-needed investments in the health workforce also lead to the creation of qualified employment opportunities, in particular for women, spurring economic growth.

A paradigm shift is thus needed in how we plan, educate, deploy and reward health workers.

Reflecting on a decade of lessons learned in health workforce development efforts, the Board of the GHWA notes that much progress has been made,

but that much remains to be done to attain its original vision that “all people everywhere will have access to a skilled, motivated and supported health worker, within a robust health system”. While this vision remains as relevant today as it was when it was adopted, attaining it will require a new discourse, and a radical transformation of implementation efforts at country level,¹ moving:

- away from seeing health workers as a recurrent expenditure to contain, and towards recognizing health workforce investment as a strategy for the creation of employment opportunities, particularly for women, and as a driver of socioeconomic development;
- beyond fragmentation and underfunding towards an overhaul of national and global governance for HRH, laying the grounds for effective intersectoral action and ambitious economic investment plans supported by public sector and international financing to meet current and future HRH needs; and
- towards a dramatic improvement in efficiency, made possible by stronger national institutions able to devise and implement more effective strategies and appropriate regulation for health workforce education, a more sustainable and responsive skills mix, and improved working conditions, reward systems and career pathways for HRH.

Better evidence will be a critical enabler for enhanced governance and accountability at national and global levels. Evidence-based planning and forecasting of workforce requirement,

¹ Throughout this document, reference to policy and actions at “country level” or at “national level” should be understood as relevant in each country in accordance with subnational and national responsibilities.

informed by reliable and updated health workforce information, labour market analyses, and scanning of future scenarios, will be required to inform the development and implementation of workforce strategies. Ensuring effective governance in countries, and aligning the required efforts of different sectors and constituencies in society, is critical, and requires the political will – and accountability of – heads of government. Similarly, a fit-for-purpose mechanism for global governance for HRH is needed to inform high-level political engagement, encourage intersectoral and multilateral policy dialogue, and foster global coordination and mutual accountability, effectively linked with United Nations system processes and mechanisms for monitoring of universal health coverage and sustainable development goals.

We have long known *what* needs to be done; but we have now better evidence than ever

before on *how* to do it. This document reflects on the contemporary evidence on what works in health workforce development across different aspects, ranging from assessment, planning and education, across management, retention, incentives and productivity; it outlines the shared understanding among all the constituencies of the GHWA for a forward-looking health workforce agenda. It is intended to inform the development of a World Health Organization (WHO) global strategy on human resources for health, which will be considered by the sixty-ninth World Health Assembly in May 2016, and to inspire and catalyse more incisive, multisectoral action, at country level by planners and policy-makers, and at global level by the international community.

2

Learning from the past, looking to the future

2.1 Why invest in human resources for health

Health systems can only operate with a health workforce; improving health services coverage and health outcomes is dependent on their availability, accessibility, acceptability and quality (3–5). It has long been known that one of the best investments governments can make is ensuring its citizens are healthy (6); a large proportion of the growth in full income (factoring in also the monetary value of increased life expectancy) in low- and middle-income countries in recent decades has resulted from better health (7). However, health priorities of the emerging post-2015 development framework – such as ending the AIDS, tuberculosis and malaria epidemics, achieving drastic reductions in maternal mortality, and ending preventable deaths of newborns and under-5 children – will remain aspirational unless accompanied by strategies involving transformational efforts on health workforce capability. Indeed, building an adequate health workforce can represent a highly cost-effective public health strategy: for instance, investing in midwifery education, with deployment to community-based services, could yield a 16-fold return on investment in terms of lives saved and cost of caesarean sections avoided, and is a “best buy” in primary health care (8). Beyond the health goals set by the international community, all nations should have the ability to protect the health of their populations and fulfil their obligations towards collective global health security envisaged in the International Health Regulations (9); this in turn requires a skilled, trained and supported health workforce (10).

New evidence is starting to emerge on the broader socioeconomic impacts of health workforce investments. In many high-income countries, empirical data show that health sector

employment has in overall terms remained stable or grown during the recession, contributing to the resilience of national economies (11). In the past, health sector employment has largely been seen as consumption, a recurrent cost – weighing heavily on public sector budgets – to be contained. But recent analyses using global data drawn from low-, middle- and high-income countries show that health care employment has a significant growth-inducing effect on other sectors (12). This fundamental shift in our understanding, together with the expected growth in health labour markets, means that investing and supporting health care education and employment will increasingly represent a strategy for countries at all levels of socioeconomic development to create qualified jobs in the formal sector, an opportunity likely to be harnessed in particular by women due to health workforce feminization trends. Beyond its obvious role in terms of ensuring healthy lives and promoting well-being for all at all ages, investment in HRH has therefore the potential to be a driver for socioeconomic development at large, including poverty elimination, gender equality, synergies with the education agenda, and the creation of productive employment and decent work for all (13).

2.2 Taking stock of experience to date

In mapping a forward-looking agenda, it is critical to reflect on lessons learned from the past. The pivotal role of HRH in the attainment of health goals has long been the focus of targeted analyses: the Joint Learning Initiative (14) and the WHO *World health report 2006* (15) drew specific attention to the challenges affecting low- and middle-income countries, calling for a “decade of action” on HRH. The launch of the GHWA (16), the convening of three global forums on HRH (in 2008, 2011 and 2013) (17), and the adoption in 2010 by the World

Health Assembly of the WHO Global Code of Practice on the International Recruitment of Health Personnel (18) represented key milestones of the HRH movement in the last decade, having bolstered political attention to the issue.

Countries at all levels of socioeconomic development face, to varying degrees, difficulties in the education, deployment, retention, and performance of their workforce (5).

While a growing resource envelope is envisaged in low- and middle-income nations, many high-income countries struggle to match supply and demand of health workers under existing affordability and sustainability constraints, a trend likely to be exacerbated by ageing populations, and which is resulting in a chronic underproduction of health workers and a continued overreliance on importing foreign-trained health personnel (19). Furthermore, even in the absence of the numerical shortages found in low- and middle-income countries, evidence has emerged of large and unexpected variances in the quality of care in high-income countries, which severely affect health care outcomes and point to the need for radical improvements in the competencies and performance of health workers in these settings (20).

Despite significant progress, there is a need to boost political will and mobilize resources for the workforce agenda. Past efforts in health workforce development have yielded significant results: examples abound of countries that, by addressing their health workforce challenges, have improved their health outcomes (21, 22). In addition, at the aggregate level, health workforce availability is improving for the majority of countries for which data are available, although often not rapidly enough to keep pace with population growth (5). However, progress has not been fast enough, nor deep enough. The key challenge is not lack of evidence on effective interventions: it is how to mobilize political will and financial resources for the contemporary HRH agenda (23, 24).

2.3 Envisioning future scenarios and understanding trends

A critical challenge in health workforce development is to respond to today's needs while anticipating tomorrow's expectations and harnessing future opportunities. Horizon scanning exercises, taking cognizance of "big picture" trends, and the quantification of health workforce needs, demands and supply in baseline and alternative scenarios, are of paramount importance (25). An evolving epidemiologic profile and population structures

are increasing the burden of noncommunicable diseases and long-term care on health systems throughout the world (26). This is accompanied by a progressive shift in the demand for patient-centred health services and personalized care (27). There are opportunities in the adoption of preventive rather than disease-driven models of care. At the same time, emerging economies are undergoing an economic transition that will increase their health resource envelope, and a demographic transition that will see hundreds of millions of potential new entrants into the active workforce. Other opportunities stem from technological innovation and the beginning of a "big data" era, characterized by a dramatic growth in the types and quantity of data collected by both patients and health workers. Big data approaches applied to better understand health worker presence, performance and larger trends will give insights into the gaps and possibilities for health workforce strengthening all the way to the facility and community level. These prospects create an unprecedented opportunity to design and implement health workforce strategies that address the equity and effective coverage gaps faced by health systems, while also unlocking economic growth potential, contributing to a convergence in health and development outcomes within a generation (7).

2.4 Policy frameworks and underlying principles provide solid foundations

Numerous resolutions of intergovernmental bodies and global action plans endorsed by the United Nations in the last decade have recognized the critical importance of HRH. In the development of these recommendations, we reaffirm in particular the importance of the Kampala Declaration and the Agenda for Global Action (28), the WHO Global Code of Practice on the International Recruitment of Health Personnel (18), and the Recife Political Declaration on Human Resources for Health (29). Relevant intergovernmental agreements, mandates, resolutions and plans of action have also been endorsed at the regional level recognizing the critical importance of HRH (30). We also take note of the United Nations General Assembly resolution on universal health coverage, which identified the need for "an adequate, skilled, well-trained and motivated workforce" in order to accelerate progress towards universal health coverage (31). Furthermore, we welcome the recognition of the importance of HRH in the relevant United Nations Economic and Social Council (32), World Health Assembly (33) and International Labour Conference (34) resolutions; and, among others, in the United Nations Global Strategy for Women's and Children's

Health (35), the Every Newborn Action Plan (36), the Family Planning 2020 objectives (37), the Global Plan towards the Elimination of New HIV Infections (38), the International Labour Organization (ILO) Social Protection Floor Initiative (39), and the Global Action Plan for the Prevention and Control of Noncommunicable Diseases (40). These resolutions, political declarations and strategic documents represent a solid foundation to build upon, as they provide the mandate, framework and guidance for action on HRH and for according high priority to and recognizing the centrality of investment in HRH.

Several underlying principles guide both our analysis of the evidence and the development of a future vision. We are informed in our work by the belief that the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being, without distinction of race, religion, political belief or economic or social condition. We recognize that governments have a

duty to fulfil their citizens' basic rights regarding social protection, including the provision of essential health care, and that, in attempting to accelerate progress towards universal health coverage, priority should be given to vulnerable groups. We acknowledge that countries are bound together by a duty of international solidarity, with an obligation to assist low-income and fragile States in mobilizing sufficient resources for adequate health workforce investments. We believe that health systems should provide services that are respectful, appropriate to needs, and responsive to patients' sociocultural expectations, empowering and engaging them to be active participants in the health care production processes. And finally, we believe it is the right of health workers to be protected from violence and discrimination in the workplace (41), and more generally to be allowed to operate within a positive practice environment that guarantees occupational safety and health, with adequate support by the health system (42).

3

The contemporary evidence for a 21st century health workforce agenda

The actions required to have a fit-for-purpose and fit-to-practise health workforce in the 21st century amount collectively to a paradigm shift across several dimensions of HRH governance, financing, education, deployment and management. Applying a labour market framework to the health workforce discourse helps to understand the interconnectedness of these elements and to identify relevant policy levers.

3.1 The future for health labour markets

Understanding national and global health labour market forces and trends is critical for developing effective health workforce plans.

The demand for and the size of the global health workforce are expected to grow substantially as a consequence of population and economic growth, combined with demographic and epidemiologic transitions. Overall, these trends are accelerating the need and demand for health workers across the globe, and are compounded by an ageing of the health workforce itself. Efforts to scale up essential interventions to achieve the health-related Millennium Development Goals and universal health coverage have revealed a massive shortage of skilled health professionals in many low- and middle-income countries (15, 43). Furthermore, health workers – like all workers – are sensitive to differences in remuneration, working conditions and career prospects; substantive disparities in these factors create powerful market forces for migration, both within and outside national borders. This in turn can exacerbate pre-existing shortages, often with negative impact on the availability of health services for underserved communities. There are substantial mismatches in the needs of, demand for and supply of health workers both nationally and globally, leading to inequitable distribution and deployment of health

workers. Efforts to address health workforce issues have tended to focus narrowly on supply-side models or needs-based projections of health workforce requirements. But effective solutions will need to align these interventions with health service priorities, and with individual worker preferences and expectations, as well as with the broader labour market and economic conditions of the country. Developing greater awareness and competency in managing health workforce labour markets and devising effective policies that harness capacity and resources in both the public and private sector will be an essential feature of an effective strategy to attain any public health goals (44) (figure 1).

Unless corrective action is taken, the disconnect between the needs of, demand for and supply of health workers will continue in future, contributing to national and global imbalances.

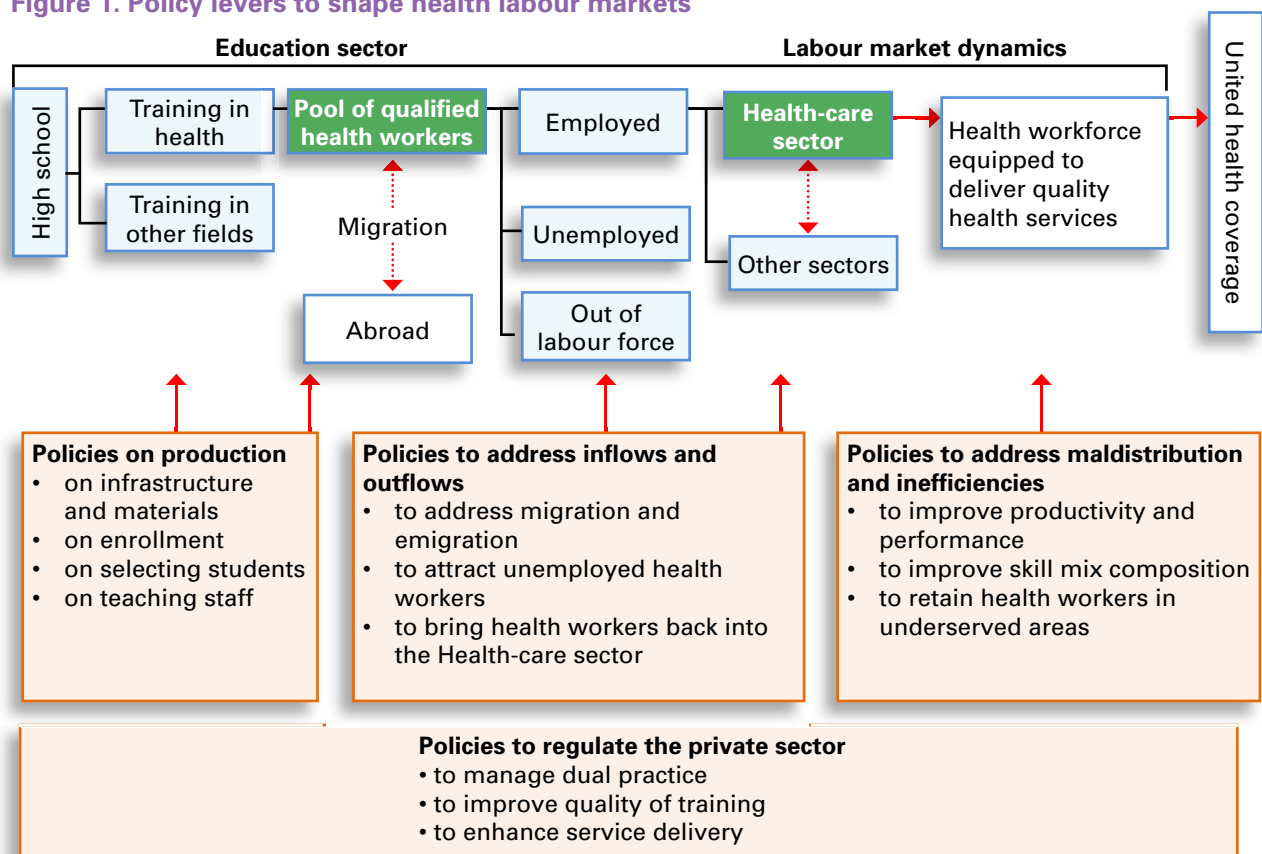
In developing health workforce plans that effectively consider, respond to and shape labour market conditions, policy-makers will need to address multiple factors, including (a) estimation of number and category of health workers required to meet public health goals and population needs; (b) capacity to produce sufficient qualified workers (education policies); and (c) labour market capacity to employ and retain health workers (economic and fiscal capacity, workforce deployment and remuneration). On current trends, by 2030 low-income countries are expected to face a substantial and widening mismatch between the number of health workers needed to provide essential services (need), the availability of health professionals (supply) and the country capacity to employ them (demand) (table 1). A modest growth in the capacity to employ workers will lead to a shortage based on economic demand, with the overall supply of health workers remaining constrained. Greater investments will be required in these contexts to

boost market-based demand and supply, and align them more closely with population health needs. By contrast, upper middle-income countries will see a narrowing gap between the supply of health workers and the numbers needed to provide essential health services. However, economic growth and demographic trends in these countries will boost the demand for health care beyond the essential services, and the current pace of health worker production will need to be significantly accelerated to meet the demand. This tight labour market condition could potentially raise the cost of health workers, possibly stimulating labour movements across borders and fuelling cost escalation in the health sector in these countries (44). These dynamics, together with a growing demand for health workers in high-income countries, and a persisting divergence in working and living conditions in different countries, will continue to make international migration of health workers an unavoidable fact. At the same time, high-income countries need to improve their educational investment strategies during times of recession; the countercyclical impact in high-income countries, where health workers seek additional hours or delay retirement during economic downturns, results in newly qualified students being unable to enter the employment market and eventually in them being lost to health care (46).

3.2 Data and evidence for sound planning and decision-making

A dramatic improvement in the availability and use of HRH data for planning and policy-making is both required and possible thanks to technological innovations. A precondition for the understanding of health labour markets and the design of effective policy solutions is the availability of reliable information on health workers' stock, distribution, flows, demand, supply capacity and remuneration, in both the public and private sector. Data for HRH are available from a variety of sources at national and global levels. However, the use and comparability of data within and across countries is undermined by the diversity of definitions and the lack of norms and standards among HRH measurement tools (48). Furthermore, there is low capacity to use evidence-based information in HRH planning (49). There is broad consensus on the policy necessity and urgency of improving health workforce data and measurement, and on their application to policy and planning processes. Technological advances, connectedness and the Internet, as well as the rise of new approaches for health workforce futures (50), create opportunities for HRH data collection, gathering and utilization; understanding and using the increasingly available data require

Figure 1. Policy levers to shape health labour markets



Source: Sousa et al. (45).

focus on tools that enable gathering, storing and utilization of interoperable data and on building analytical capacity. The adoption of information technology-based solutions for HRH data collation and storage, avoiding the capital-heavy infrastructure needed in the past, may represent a leapfrogging opportunity for low- and middle-income countries, although the greatest challenge in these settings lies in the development of the human capital required to operate HRH information systems.

The post-2015 agenda requires aligning the public policy agenda on governance, accountability and equity with strategic intelligence on the national and global health labour market.

Improvements in HRH information architecture

and interoperability can generate core indicators. Data should include a comprehensive overview of the workforce characteristics (public and private practice); remuneration patterns (multiple sources, not only public sector payroll); workers' competences (including the role of different health workers, disaggregated across cadres and between different levels of care); performance (systematic data collection on productivity – full-time equivalent – and quality of care); absence and absenteeism and their root causes; and labour dynamics of mobility (rural vs urban, public vs private, international migration) (51). The overall strengthening of HRH data and measurement could in turn lay the foundations for research on cost-effectiveness and return on investment in health workforce interventions (52).

Table 1. Estimated health worker^a deficit^b by region and income

Region	Demand-based gap ^c			Needs-based gap (3.45/1000 threshold) ^d		
	2012	2030	AEGR ^e in supply needed	2012	2030	AEGR in supply needed
East Asia & Pacific	10,505,676	27,329,247	9.26%	1,486,652	2,017,995	1.89%
Europe & Central Asia	1,628,263	4,485,682	2.37%	0	0	NA
Latin America & Caribbean	629,735	2,240,624	6.01%	249,842	427,429	3.12%
Middle East & North Africa	311,899	1,814,130	5.05%	268,459	439,869	3.93%
North America	672,192	3,713,399	3.51%	0	0	NA
South Asia	398,190	3,432,044	3.87%	2,291,638	3,481,713	3.91%
Sub-Saharan Africa	466,113	2,356,154	6.68%	2,103,770	3,757,522	10.21%
Income						
Low	187,806	1,118,200	6.36%	2,208,782	3,438,042	11.74%
Lower middle	2 251,233	10,658,754	5.63%	3,091,924	5,013,848	4.20%
Upper middle	9,929,267	24,871,142	8.52%	1,044,690	1,583,102	1.51%
High	2,243,762	8,723,184	2.97%	54,965	89,536	3.37%
World	14,612,068	45,371,281	5.64%	6,400,362	10,124,528	3.86%

Notes:

- Health worker refers to physicians and nurses/midwives (excluding other types of health personnel, such as dentists, pharmacists and administrators). Needs-based estimates are generated from a single model of combined physicians and nurse/midwife data rather than aggregated from separate models for physicians and nurses/midwives.
- Totals reflect only countries with estimated gaps, defined as the difference between estimated demand or need in 2030 and the current (2012) HRH supply. Surpluses are not counted towards the accumulation of totals. This follows the methodology in *The world health report 2006* (15).
- The demand for health workers is estimated based on a model using per capita gross domestic product (GDP), per capita out-of-pocket health expenditures, and population aged 65+.
- Campbell et al. (5) utilized ILO's proposed threshold of 3.45 health professionals per 1000 population. Using a similar methodology, this is the estimated deficit by 2030. The estimate is informed by assumptions in attrition and replenishment of existing staff.
- AEGR = average annual exponential growth rate required to meet the demand or health worker need by 2030; calculated for regional/income group gap subtotals.

Source: Scheffler, Liu and Bruckner (47)

Countries should invest in strengthening their analytical capacity of HRH and health system data on the basis of policies and guidelines for standardization and interoperability of HRH data, such as the WHO Minimum Data Set. National and subnational collection and reporting of health workforce data should be encouraged by means of standardized, annual reporting to the WHO Global Health Observatory, and supported also by national and regional HRH observatories. These efforts would be greatly aided by a revision of the current ILO International Standard Classification of Occupations (ISCO), for greater clarity on classification of health workers and health professions, moving towards competency-based rather than task-based definitions (46). Countries should establish national health workforce accounts that extend the Minimum Data Set to a comprehensive set of key performance indicators on the health workforce labour market. All workforce data (respecting personal confidentiality) should represent a global public good to be shared in the public domain by governments, health care professional associations and development partners. Incentives should be created for the collection, reporting and analysis of workforce data to inform transparency and accountability, and public access for different levels of decision-making. But a focus on the data will not suffice: capacity-building in both the systems and human capital required to operate them is needed, as well as in how to use data effectively for dialogue with policy-makers. The development of HRH information systems should be professionalized through targeted capacity-building initiatives and the establishment or strengthening of relevant institutions at national level (51).

3.3 Leadership and governance for effective stewardship of HRH development

Leadership and governance are enablers of strong health systems. Health workforce development is partly a technical process, requiring expertise in HRH planning, education and management, and the capacity to root this in the long-term vision for the health system as a whole; but it is also a political one, requiring the will and the capacity to coordinate efforts by different sectors and constituencies in society, and different levels of government (53). Therefore a discourse on effective stewardship and leadership for HRH has both a political and a technical dimension.

A key determinant of progress in HRH development efforts is high-level political commitment and accountability mechanisms

to guarantee the alignment and coordination of different sectors and constituencies in support of long-term action (54). Political leadership is needed (a) to establish the national business case for HRH, to support it by necessary regulations, and to use it for demanding plans and budgets from public and private educators and employers of health workers; (b) to marshal support from ministries of finance, education, labour, civil service commissions, local government and the private sector; (c) to accelerate the adoption of innovative processes, technologies, service organization and training delivery modalities; (d) to mobilize adequate resources (whether domestically or internationally in the case of aid-dependent countries) to meet priority health system needs; and (e) to overcome rigidities in public sector rules and practices that hinder the adoption of adequate reward systems, working conditions and career structures for health workers. The successful development and implementation of a transformative health workforce agenda requires a “whole of government” approach, with political ownership residing within senior and influential leaders of a country’s parliament and executive branch, and across ministries of labour, finance, health, economic development and education (55). Without such high-level and sustained political commitment, policies on HRH will not be translated into effective action, and the implementation of global frameworks such as the WHO Global Code of Practice on the International Recruitment of Health Personnel will remain fragmented. In contexts of frequent rotation of health and other government authorities linked to political cycles, there is always a risk that policy directions are reversed. This risk can be mitigated if stakeholders, including all types of health workers and especially citizens, are engaged in participatory decision-making. This political process must also be able to accommodate the legitimate involvement and interests of a range of stakeholders while not losing sight of public policy objectives. The political economy of health and the influences on decision-making by health professionals and their unions or associations, regulatory bodies, employers’ associations, insurance funders and other stakeholders – sometimes in their self-interest – should also not be underestimated (5). The need to convene multiple stakeholders and resources calls for the establishment of structures and forums for coordinated governance and policy dialogue (56).

Committed political leadership needs to be backed by technical and management capacities to translate political will and decisions into effective implementation. Planners, managers, administrators, service users from the population,

BOX 1. Building institutions for HRH development in fragile States and disrupted contexts

In fragile contexts it is critical to prioritize institutional capacity-building. In conflict and post-conflict settings and fragile contexts, severe disruption to health systems negatively affects population health outcomes, and health workers may be themselves victims of violence, displacement and conflict. Effective human resource management strategies are critical to addressing the systemic effects of conflict on the health workforce, such as flight of human capital, mismatches between skills and service needs, breakdown of pre-service training, and lack of health workforce data (59).

Responding effectively to the needs of fragile States is an ongoing challenge for the international community, requiring a high level of coordination, setting priorities that meet short- and long-term needs, and promoting resilience in complex systems. Recognizing that State fragility may have different underlying causes, a critical aspect is to understand the type of fragile State and the implications of this on the required interventions: each disrupted context is unique, and solutions have to be developed accordingly. Considering the type or cause of fragility should influence the sequencing of interventions: when a State lacks the capacity to control and implement programmes, systemic sustained development will be difficult to achieve. The technical work demanded to revamp a disrupted health workforce is fairly well understood. In most situations, however, the hardest obstacles lie outside the health domain, and are of a governance and political nature (60). This is especially true for health workforce development, which requires institutions and policies that ensure a regulatory framework, as well as management and supervision of service delivery. Multiple modalities of intervention for HRH will need to be considered with different starting points, which will be determined by the typology of fragility for each context, by the governance structures (whether centralized or devolved to peripheral authorities), and by agreeing on entry points that make most impact. Without a strong central system of governance, health workforce interventions may be more effective if targeted at a decentralized level or through non-State actors, where results can be seen more quickly and lessons learned for scaling up. The window of opportunity – when availability of donor funding is often perceived as a chance for stabilization and increasing service coverage – should be seen as a way of making rapid progress towards stronger institutions (61). Addressing governance issues from a health systems framework is therefore critical, and requires mechanisms for achieving a common understanding of context and interventions that brings all the stakeholders together, with the State in a coordinating role. Finding new ways to measure progress – including a rapid results approach where targets are short to medium term and measured regularly – may be required to accompany the progressive realization of a longer-term vision.

academia and professional associations are needed to provide political leaders with quality information for policy formulation, to assess the health and social care workforce implications of any national health goal and target, and to drive the performance of systems for policy implementation in which HRH operate. The public health workforce also needs to connect health workforce development efforts with the wider social determinants of health, including access to housing, food, education and the local environment. Professionals with relevant skills in workforce planning and management should ensure that the approach to workforce development is comprehensive and systemic in terms of occupational groups considered, responsive to needs through an appropriate balance among different cadres and specialty areas (57), and cognizant of the interconnectedness of various dimensions of HRH policy (education, working environment and conditions, funding and management) and of the private and public sectors. Policies should meet current and future anticipated patient and population health needs and problems. HRH is a constant,

evolving dynamic and is best served by continual refinements rather than a static planning process to be revisited only every five years.

There is a need to professionalize the field of health workforce planning and management as part of the public health workforce. Just as we need capable health professionals, we need capable professional health managers. This is essential in order to provide political leaders with the required evidence and technical advice and to guarantee effective implementation and oversight of policies once these are developed (58). At present, health workers, managers who work in health systems and HRH are undervalued, underprepared, undersupported, and underpaid. Reducing the HRH crisis demands better human resource planning and management. Better human resource planning and management demands the availability of an enhanced and strengthened profession. Professional human resource managers are needed to perform such key duties as advocating HRH development; championing better working conditions, reward

systems and career structures for health workers; leading short- and long-term health workforce planning and development; analysing workforce data and labour economics; guiding the design, development and delivery of pre-service and in-service education of health workers; supporting the development and strengthening of health professional associations; designing more effective performance management and reward systems; engaging with private sector educational institutions and health providers in a collaborative fashion to support the attainment of public health objectives; and monitoring and evaluating HRH interventions. Capacity in this domain should be nurtured through recognition, incentives and targeted capacity-building initiatives, and we call on WHO to develop an accredited, internationally recognized, postgraduate professional programme on HRH policy and planning, with an international mentoring and professional network to support the implementation of workforce science.

3.4 Mobilizing financial resources and securing their strategic use

Public sector intervention to correct for the insufficient provision of health workers, their inequitable deployment or their inadequate performance is needed. In the coming decades the fundamental disconnects between supply and demand in many countries will be exacerbated with greater demands on health services, contributing to persisting migration of health workers towards high-income countries and towards urban areas in countries at all levels of socioeconomic development (5). Implementing an HRH agenda conducive to the attainment of the health goals in the post-2015 agenda will require greater availability of resources; domestic spending on HRH is lower than is typically assumed (62), and in many low- and middle-income countries greater investments are both necessary and possible. Insufficient investment in the health workforce has often translated into endemic shortages, with management and policy focus diverted to short-term “quick fixes”, contributing to squandering the limited resources available, instead of using them strategically with a long-term focus. The need for funds is extensive for such items as appropriate terms and conditions of employment, better working conditions (including at the very least the provision of a living wage), incentives for equitable deployment, transformational education and the creation or upgrading of institutions for effective technical stewardship, monitoring and oversight of HRH policy implementation. An essential stewardship function in this context is to mobilize

adequate financial resources. The funding levels should reflect the value of effective HRH to the country's economy by factoring the potential for improved worker productivity in other sectors (63). The HRH financing strategies should extend beyond the traditional 2–3 year planning horizons to 10–15 years. Domestic resources should be mobilized from both traditional and innovative sources, including the general budget, social health insurance, dedicated earmarked funds, ring-fenced excise taxes, and corporate social responsibility funding from extractive industries such as mining and petroleum (55). Leadership and support by ministries of finance will be enablers for effective action to broaden the resource base.

But, in addition to securing adequate overall levels of investment, it is perhaps even more critical to ensure the effective use of available resources. A critical challenge lies not just in mobilizing financial resources for the HRH plan, but also in ensuring that these are allocated to the appropriate sections that need to implement it. It has been estimated that globally between 20% and 40% of all health spending is wasted (64), and health workforce inefficiencies are responsible for a large proportion of that. Examples exist of how simple, yet how transformational, cutting wastage on HRH can be, for example by excising ghost workers from the public sector payroll (65). In high-income countries, the challenge will be to balance the growing needs related to an ageing population and new and ever more expensive health technologies with a resource envelope constrained by fiscal retrenchment policies. Economic incentives may naturally lead to the provision of highly specialized and costly care, unless corrective action is taken to align incentives for health workforce education and health care provision to public health goals. Equally critical is to ensure that population demand for specialist care does not lead to underinvestment in general practice and family medicine, but gives rise to a more appropriate and cost-effective approach to provide community-based, person-centred, continuous and integrated care. While the exact make-up of primary care teams should be tailored to meet local needs, the inclusion of a family medicine doctor may be an approach to deliver high-quality and comprehensive primary care (66).

In low- and middle-income countries, the foreseen expansion of the health resource envelope should lead to cost-effective resource allocation, and specifically to a workforce geared to a primary health care delivery model. Low- and middle-income countries should take stock of the experience of high-income countries and

avoid falling into a trajectory and skills bias towards high-end technology, which may lead them to cost escalation and which may serve the needs of the few who can afford the care (44). Achieving the health goals of the post-2015 agenda will require a paradigm shift in health care delivery systems, aligning market forces and population expectations towards primary prevention and community and home-based models of care (67). Such a system requires multidisciplinary primary care teams of health workers with broad-based skills. For example, the nursing scope of practice has been shown to be adaptable to population and patient health needs, and has been particularly successful in delivering services to the most vulnerable and hard-to-reach populations (46). Similarly, the midwifery scope of practice has the potential to provide 87% of the essential care needed for sexual, reproductive, maternal and newborn health services (8). Rather than copying staffing structures and arrangements from abroad, these countries should meld these with lessons from their own rich traditions, especially in programmes involving mid-level and community-based providers (54); There is indeed growing evidence on the effectiveness, accessibility, acceptability (68, 69) and cost-effectiveness (70, 71) of these approaches. In settings where external financial support is still required, the impact of development assistance for HRH development can be maximized if it is more strategically targeted (see also section 4) (72).

These HRH reforms should take place in the context of substantial changes in the health care delivery model that will lead to improvements in health workforce productivity. Opportunities for innovation exist, including through the use – where relevant – of performance-based incentives (73), and of technological innovations that save costs rather than increase costs, contributing to the attainment of health goals in an affordable and fiscally sustainable manner. Policy and regulatory responses will be needed to improve utilization and efficiencies in health care, and enable optimization of services, for example by up-skilling current workers and allowing greater flexibility in determining the appropriate skills mix (44), while overreliance on task delegation should be avoided. It is necessary to move towards a more flexible workforce, removing rigid divisions between health professions with “right touch” regulation in order to better respond to ever-changing health challenges.

3.5 Transforming education

Health workforce education systems are not currently well equipped to respond to the challenges of the 21st century. Health education

throughout the world is affected by fundamental inadequacies related to outdated, static, fragmented, content-oriented curricula. Teaching is constrained by a narrow contextual understanding of health care provision, and practical experience is provided in the context of episodic encounters with patient illnesses rather than continuous health care, emphasizing treatment rather than disease prevention and health promotion. Furthermore, health education typically suffers from a lack of understanding of the social and cultural determinants of health, and imbalance between health personnel and health needs. Additional challenges include appropriate measures to prepare students for deployment and retention where they are most needed and job availability after graduation. Collaboration between health personnel training institutes and health delivery systems is also inadequate (74).

Public sector investment is required to improve the quality and efficiency of health workforce education, and to match competencies acquired through education with those needed on the ground.

Maximizing the return on investment in health workforce education and training is however essential, and part of this process entails planning to ensure that there is funded demand to utilize the supply of health workers, and that these are commensurate with population needs. The health education sector cannot be left entirely to market forces, as these can put the quality of public sector education at risk, or lead to skills mix imbalances across cadres or among different specialty areas, such as the oversupply of specialists and undersupply of generalists seen in many high-income countries. Investment in public sector education is required to maintain the capacity, faculty and quality of training institutions (5, 75). And incentives are needed to increase the alignment of national health workforce needs with production from privately owned training institutions.

A transformative agenda on health workforce education should be embraced, comprising changes in the way students are taught, in the way teaching institutions operate, and in how broader health system policies enable health education, including through the strategic use of in-service training and continuous professional development, reorienting competencies towards a primary care model to deliver patient-centred health services and fully harnessing the potential of information and communications technology (ICT). These shifts are required both to improve the quality of education and to optimize the impact of the required investments.

At the instructional level, teaching should transition towards competency-based learning, including – where appropriate – interprofessional and transprofessional education and team building, and community-based learning with community and student engagement. Policies should be put in place to reform postgraduate training to achieve an appropriate balance of generalists and specialists; community-based practitioners should be recruited and trained as teachers and mentors. There should be a shift in the locus of responsibility for learning from the teacher to the student, and pedagogy should be redesigned with the inclusion of learning on social accountability, health and gender equity, social justice and human rights, and to generate leadership qualities to enable health workers to be effective change agents for the health care system and the communities in which they operate. Collaborative practice among different cadres should be encouraged, adopting a coordinated approach to HRH planning and education.

Joint education and health planning mechanisms should redesign health workforce intake approaches and inform modifications of health education institutions. These should take into account crucial dimensions, such as social origin, age distribution and gender composition of the health workforce; as part of this, there is a need to invest in establishing more HRH education institutes in rural areas, and to expand academic centres to academic systems encompassing networks of hospitals and primary care units. This will facilitate the recruitment to training programmes of students who reflect the sociodemographic characteristics of the populations they serve, with special consideration to underserved and disadvantaged populations. Institutional management and financial reforms should promote interdisciplinary collaboration and continued faculty development.

Enabling policies should include promoting high-level engagement and support for the proposed education reforms. Competency-based national licensing and relicensing assessments for graduates from both public and private institutions should be strengthened as part of a socially accountable accreditation system, and accompanied by regulatory systems to ensure academic quality standards through accreditation (74). New professional regulatory models are needed to address patient protection, contribute to the availability of real-time data on workforce competence and capacity, and ensure optimized data transfer that facilitates mobility (76). In low- and middle-income countries this agenda entails also intersectoral collaboration

geared to generate a renewed focus on primary and secondary education, with a view to ensure an adequate and gender-balanced pool of eligible high school graduates, reflective of the population's underlying demographic characteristics and distribution, to enter health training programmes (77).

3.6 Deploying and keeping health workers where they are needed

Nearly all health systems face, to a varying degree, the challenge of geographical maldistribution of health workers. Urban and affluent areas concentrate health workers, attracted by better working and living conditions for themselves and their families, and by opportunities for professional development and for maximizing income through dual practice. Without improving geographical distribution, national averages of density of health workers become meaningless, as the majority of these may be inaccessible to the population, thwarting any attempt to expand coverage of services (78). A renewed focus on equity requires avoiding the gradual shift to two-tiered health systems, with formally educated and well-trained health workers catering to urban middle- and upper-class citizens, and an informally trained community-based workforce catering to populations in rural areas and to lower socioeconomic segments of society. Geographical maldistribution is a problem also in high-income countries: in actual fact a closer examination of international migratory flows reveals how international migration is seen as a solution not necessarily in the context of absolute shortages at the aggregate level, but specifically in relation to the inability of deploying domestic health workers to underserved areas of high-income countries; conversely, internationally recruited health workers may be willing to accept, at least temporarily, the living and working conditions there, before moving on themselves to more attractive duty stations (79).

Effective attraction and retention strategies are needed to deploy and keep health workers where they can best make a positive difference to population health. The dynamic nature of health care labour markets means that retention and distribution policies must be aligned with changing health workforce profiles, as well as with health system priorities, and be kept under periodic review to assess their impact. Many countries have tried a variety of policies to influence or direct the choice of practice location of health workers, including education strategies, financial and non-financial incentives, regulatory measures or service delivery reorganization (80).

Attraction and retention policies are mutually reinforcing and need to be delivered as coherent and integrated bundles if their impact is to be maximized. The main policy options on moving towards a more equitable deployment include (a) selection of students with a rural background and an intrinsic motivation to work and live in rural settings, tailoring curricula, teaching methods and the location of education infrastructure to practice in rural areas; (b) The use of innovative incentives (both monetary and non-monetary), including job security, a manageable workload, professional development opportunities, enhanced career development pathways, family and lifestyle incentives, hardship allowances, and housing and education allowances and grants; (c) regulatory measures to enhance the scope of practice in rural areas, and, where bonding or compulsory service agreements are in place, accompanying them with required support measures; and (d) a positive work environment, such as the availability of necessary supplies and adequate referral services, health care workers' safety, access to information, and supportive management and supervision (42). Sound governance and stewardship are required to put in place policies, practices and resources that are needed to recruit and retain HRH where they are needed in each country. Because the factors that shape the motivation of health workers and their willingness to accept postings to disadvantaged areas are so varied, a comprehensive suite of tools and strategies must be advocated and used, assessing their effectiveness and impact over time (81). A skills mix relevant to the local context, and accompanied by adequate recognition and reward systems and accessible career pathways, will be conducive to both improved retention and enhanced quality and performance of health workers.

3.7 Maximizing quality and performance of existing health workers

Health workforce quality is determined by the competencies of health workers, as influenced by the enabling environment of education, regulation and association. The measurement of quality of the health workforce is hindered by the lack of a universally accepted definition or indicators, leading to a neglect of this critical dimension in the policy discourse and actions. This is a major challenge in all countries: in some high-income countries these gaps are openly recognized and are being addressed, whereas the issue is largely overlooked in other countries, and the uptake of initiatives aimed at improving health workforce competencies or quality of care is very uneven. While some form of accreditation and certification exists in almost every

country, in general there is no proactive surveillance of the quality of practice in the form of periodic on-site monitoring. Quality of performance is deemed to be correct until some complaint is formulated or some error or misbehaviour or health problem is detected (5). Capacity-building of regulators and regulatory authorities may represent a precondition to the effective enforcement of standards.

Policy actions to enhance health workforce quality and performance are required, targeting the health system at large, the workplace and individual health workers. While there is an abundance of evidence-based guidelines and consensus on what should be done to improve quality of care, many simple, high-impact interventions capable of saving lives and alleviating suffering are not reaching the people who most need them. Much of this implementation gap is related to poorly designed processes of care delivery and weak health systems (82). Health worker performance barriers, such as unclear roles and expectations, vague guidelines, poor processes of work, inappropriate skills mix within the work setting, competency gaps, lack of feedback, difficult work environments and unsuitable incentives, mean that even where there are no critical workforce shortages, health workers may still fail to provide quality care. Conversely, the determinants of health workers' performance and productivity are rooted in factors related to (a) the macro or overall health systems, socioeconomic, labour market and political level; (b) the micro level, such as the workplace itself or the communities in which health workers live (42); and (c) the individual characteristics of health workers themselves (see figure 2). HRH interventions such as standards of health care, quality improvement and regulation work in a dynamic relationship with each other to improve health worker performance and productivity (83).

Standards codify the evidence-based interventions that should be incorporated into practice and the performance expectations in the delivery or implementation of quality health services. Standards are thus the cornerstone of most health care improvement approaches, including accreditation of health facilities, external quality evaluation, continuous quality improvement and performance improvement. Adherence to evidence-based standards has been shown to be associated with improved health outcomes (84). While a more diverse skills mix represents an opportunity for greater accessibility and improved responsiveness and acceptability of care, harnessing its full potential will require that cadres other than doctors, nurses

and midwives also benefit in a systematic manner from similar processes and mechanisms to enhance quality of care, such as clarity of roles, development and enforcement of standards, regulation and professional association. Combinations of interventions are more effective than single interventions to induce and maintain health workers' adherence to evidence-based standards. Labour standards can provide useful guidance for health care quality standards as they address conditions under which health workers perform (34, 39, 85, 86).

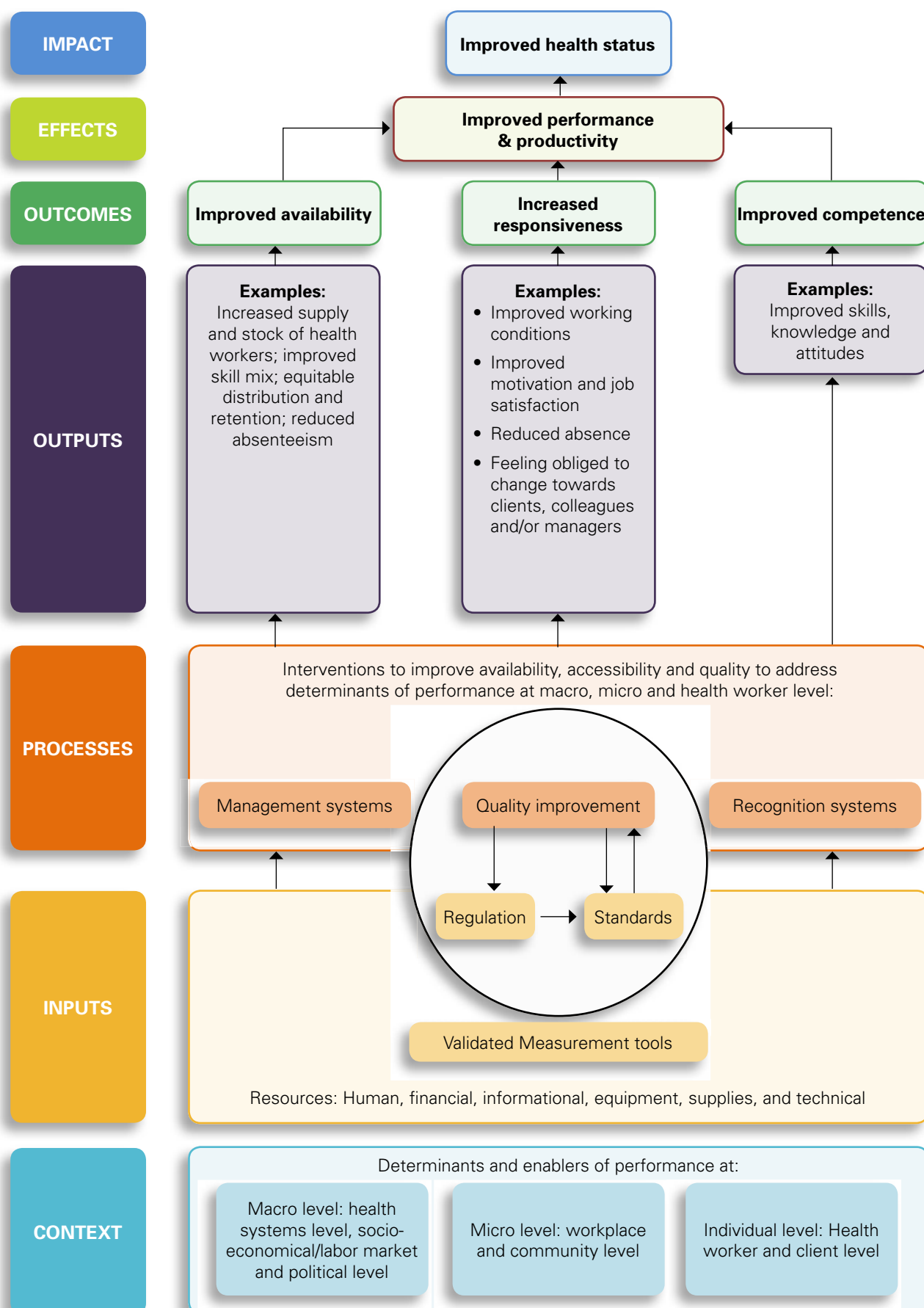
Multipronged quality improvement strategies are required to make systematic changes in the way health care is delivered. A core component is strengthening the capacity of managers, health workers, lay workers and volunteers to manage their own performance, identify strategies for improving care, and monitor and evaluate best practices and health outcome results, so that evidence will inform decisions and shape policies. This capacity, developed at all delivery levels, results in strengthened systems and sustained quality of care (82). Much of the current focus of quality improvement has been on redesigning care delivery processes to enable providers to follow evidence-based guidelines, overcoming the "know-do" gap. These experiences in adapting improvement methods to work across organizational levels are showing promising results (87). Employee involvement through quality improvement teams has resulted in improved processes of care and patient outcomes (88). Engaging health workers in the design, testing and implementation of changes enables clinical and non-clinical health workers at all levels of the system to innovate and test practical ways that better utilize existing resources to improve health care (89, 90). However, considering the limitations of quality improvement approaches based exclusively on in-service training (91), such as duplication, fragmentation and disruption of service provision, there is a need to integrate competencies into pre-service and in-service training, referral systems and regulatory mechanisms.

Regulation that is transparent, accountable, proportionate, consistent and targeted is another cornerstone of efforts to improve health workforce quality and performance (92). The main purpose of the regulation of health professionals, including public health professionals, is to protect, promote and maintain the health and safety of the public. This is achieved by ensuring professionals are competent, sufficiently experienced and adhere to agreed standards of ethical practice, and by maintaining a register

of those who meet the standards of education and professional behaviour (93). There are four recognized elements of regulation: registration, standard setting, accreditation, and management of conduct and performance matters (94). "Right touch" regulation identifies eight elements at the heart of good regulatory practices: identify the problem before the solution; quantify the risks; get as close to the problem as possible; focus on the outcome; use regulation only when necessary; keep it simple; check for unintended consequences; and review and respond to change (95). The impact of regulation can be maximized through collaboration among self-regulating professional associations, institutional regulators and civil society (15). Where responsibilities are devolved to professional councils or associations, it is desirable that mechanisms are put in place to prevent a conflict of interest between their role as guarantor of the quality of practice and that of representing their members (5). Comparative experience across countries identifies the main elements of successful regulatory systems: regulation that protects the public yet facilitates change; a register of the competent and practising, rather than those that have simply completed a programme; oversight or accreditation of pre-service education programmes; mechanisms to assure continuing competence; approaches that enable amendment of scopes of practice to meet changing health needs; fair and transparent processes that support practitioner mobility and simultaneously protect the public; and a range of conduct and competence approaches that are proportionate to risk and efficient and effective to operate (83). A systems-based approach is needed for the development and implementation of contemporary statutes and regulatory mechanisms and processes.

Health provider performance and resilience is ultimately determined by a combination of factors contributing to a positive practice environment and motivation. Improving individual competencies within a system without a sound structure can have limited impact. Optimizing the performance of health personnel requires a clear definition of models of care, and adequate financing and organization of health systems. Beyond the role of standards, quality improvement and regulation, there are many other factors that influence workforce performance and productivity. Job satisfaction, productivity and organizational commitment – all variables that influence quality and performance – are determined by management and governance systems, leadership practices, clarity on roles and expectations, supervision systems, active involvement of staff in the decision-making process,

Figure 2. Framework for improving health worker performance and productivity



Adapted from Dielemen et al. 2009 Informed by Campbell J. et al. A Universal Truth: No health without a workforce

BOX 2. Harnessing opportunities for technology innovation

ICT advances offer unprecedented opportunities for innovation, quality improvement and efficiency gains across all aspects of HRH systems. Recent global investments in fibre and wireless infrastructure, as well as innovations in e-learning, electronic health (eHealth) and mobile health (mHealth) and in the social media, can be leveraged to educate, train, deploy, support and empower health workers.

The role of technology should be needs driven, focusing on what the health care workers need to do with technology in order to achieve their goals, rather than focusing on technology as an end in itself. Four HRH areas in particular are prone to benefit from ICT advances:

- acquiring and sharing new knowledge through new models of transformative education;
- interacting with peers and supervisors for better performance, retention and motivation;
- delivering services to clients by building capacity of and empowering clients to be active participants in care provision;
- interacting with the health system itself, providing and accessing data for enhanced measurement and monitoring of performance (98).

Technological progress can contribute to scaling up health worker training and improve its quality: e-learning tools can support curriculum development and course scheduling and management in ways that are conducive to blended learning approaches and that take advantage of multiple learning environments. Training methods based on videoconferencing, webcasting, recording, localization and playback of training can enable global access to the very best educators, and may represent an important complementary approach to enhance standard face-to-face educational programmes.

Following pre-service training, ICT can be used to optimize the work of a health care provider as well as to optimize health service delivery. Examples of these applications include the use of electronic health records, clinical decision-making tools, supply chain management, performance management and feedback loops, service quality control, feeding health workers' data into electronic health workforce registries, and establishment of professional social networks. This last application has the potential to connect health workers with a broad range of stakeholders and to empower communities with knowledge and tools to demand and access health care services, thus playing an accountability function over their quality and acceptability.

These opportunities can be fully exploited by improving ICT infrastructure. But supportive policy interventions are also required, including the establishment of standards and accreditation procedures for the certification of training delivered through blended approaches that include e-learning, appropriate regulations for the provision of mHealth services and for the handling of workforce data that respects confidentiality requirements (99).

financial incentives (96, 97), and recognition and reward systems through non-monetary incentives (including health workers' career development, working environment and continuing education, for example through international fellowships and clinical exchanges). To guarantee working conditions conducive to a motivated workforce providing quality care, countries and health systems must determine and deliver a fair and formalized employment package to their workforce, which, respecting the labour and health rights of health workers, includes a fair wage appropriate to their skills and contributions, and with timely and regular payment as a basic principle, an enabling working environment (42), meritocratic reward systems and opportunities for career advancement.

3.8 Promoting self-reliance in communities

Building greater resilience and self-reliance in communities, and harnessing the workforce in other sectors in support of health goals, are important complementary strategies. The scale of the challenge to have a fit-for-purpose workforce to meet 21st century needs warrants reflection on whether health workforce strategies that focus only on health workers, and fail to adequately recognize the role of patients, carers, communities and workers in other sectors, will be sufficient. There is a growing recognition of the need for innovative approaches that go beyond training health workers and build greater individual and community resilience, making more effective use of the workforce in other sectors

to better meet the needs of poor, marginalized or remote populations. Strategies to address workforce gaps have moved beyond an exclusive focus on the formally employed and trained health workers to harness the skills, commitment and availability of other segments of the workforce, such as lay health workers, supply chain managers and logisticians (100), support staff and social services workers. Workforce strategies are increasingly recognizing the role of some of these cadres, in particular lay health workers and various types of community-based health practitioners, in extending service provision to poor and marginalized populations; the interface between the formal health system and informal and community-based health providers should be strengthened. However, the skills, competencies and multisectoral workforce requirements needed to empower communities and patients to improve health and well-being are rarely addressed in workforce plans.

Engaging and empowering communities, as well as the social services workforce, is necessary to cope with emerging needs linked to ageing populations. Without efforts towards more appropriate demand for and use of services, epidemiologic and demographic trends, coupled with rising health costs, will further stretch health systems already under strain. There needs to be a paradigm shift on how services are configured to maximize healthy lives: human resources beyond the health sector will need to be engaged and empowered to better manage health risks, share responsibility for service delivery and increase community and individual self-reliance. Communities and families are essential components of care systems, and are often carers themselves in many situations. Efforts intended to improve individual and family health need to include an understanding of health behaviours, appropriate housing designs and the environment in which people live, as well as whether and how they access health services. Comprehensive community-based health programmes need to successfully address social, cultural, gendered, economic and health workforce barriers. Empowering and engaging the community can have positive results on health outcomes through improving skills and capacity, strengthening social networks and social support, promoting local leadership, facilitating resource distribution and increasing access for participation.

Patients can be seen as assets to a health system, rather than passive recipients of care. Strengthening the role of patients in their own care increases their self-reliance and empowers them

with knowledge and skills, as well as engaging them in shared decisions and choice. Empowered and engaged patients are more likely to make informed decisions about care options, to adhere to the prescribed treatment or medications and to seek support services appropriately. Knowledgeable patients are more likely to collaborate effectively with skilled professionals towards the delivery of safe and effective care, delivered in appropriate environments and with assessed outcomes (101). Empowerment facilitates effective and efficient management of chronic diseases or conditions and promotes positive participation and independence among the population, which results in improved health and well-being and reduced use of health care resources. Health workforce strategies need to build the skills and competencies for patient empowerment. Multisectoral workforce plans that bring together health and social services, build skills and competencies for community and patient empowerment, and recognize the potential public health role of a wider range of different professional groups, will be essential if we are to make most effective use of limited human resource capacity to improve the public's health (102).

3.9 Harnessing private sector (for-profit and not-for-profit) capacity for public sector goals

Effective collaboration with the private sector (for-profit and not-for-profit) is required to harness the capacity and resources of these actors in support of the health workforce agenda.

While its role is sometimes poorly understood and typically not adequately captured by official statistics, the private sector has a profound influence on virtually every aspect of HRH development and management, and can be an ally of the public sector in areas such as education, employment, retention, performance management and information systems. The public sector has an important role to play in creating the enabling environment for the private sector to contribute to public goals regarding HRH. This includes aspects such as regulation, planning and information sharing.

Strategies are required to ensure that private teaching institutions serve the public health needs of the population. There is global trend towards an increase in private sector health education, which may represent an opportunity to expand a constrained supply capacity. At the same time, the concomitant relative decline in public sector investment in health training institutions may lead to a segmentation of the health care education market,

with well-off students accessing high-level training opportunities, typically for specialized positions, while less well-off students may avoid altogether considering health care as an occupation, or focus on less costly and lower-quality training programmes, or find their career options limited by indebtedness (15). Appropriate policy responses may include subsidizing education of students from rural or disadvantaged backgrounds, regardless of whether it is delivered by public or private institutions.

While the private sector can offer a solution to supply capacity constraints, governments should ensure that its graduates meet the same quality standards as those of public institutions.

In order to enhance workers' quality and performance so as to guarantee patient safety and protect population health needs, efforts are required, especially in low- and middle-income countries, to put in place effective and standardized accreditation, regulation and licensing systems. Governments should also facilitate policy coherence between producing new graduates for export (a trend facilitated by expansion in private sector teaching institutions) and ensuring sufficient supply to meet domestic needs, in particular in underserved areas. Countries that are experiencing shortages should prioritize meeting domestic needs over exporting in the international market (103).

The private sector can offer important lessons in terms of both working conditions and innovative approaches to performance management.

In countries where health workers are scarce, the private sector often competes with the public sector to attract workers, and often in ways that are poorly understood and documented, including the widespread phenomenon of dual practice. Public sector intervention is needed to correct for the insufficient provision of health workers, their inequitable deployment and inadequate remuneration and performance. This may require making working conditions more attractive and competitive in the public sector, but can also involve new approaches to partnerships with the private sector as a possible strategy to overcome rigidities in public sector employment conditions (104). At the same time, the private sector can also serve as an incubator for innovations to develop simpler and cheaper service delivery approaches or new business models that find alternative ways to supply and optimize the performance of the health workforce (105).

4

Estimating resource implications of the global health workforce agenda

Realizing the vision outlined requires boosting health workforce investments to meet unmet needs. Shortfall estimates developed in the last decade, based on minimum benchmarks of health worker availability deemed to be generally necessary to achieve relatively high coverage of essential health services, such as skilled birth attendance, have ranged from little over 1 million (47) to over 4 million (15) additional health workers needed worldwide. More recently, global estimates have been developed based on higher benchmarks linked to the universal health coverage objective and the social protection floor paradigm, resulting in aggregate shortages varying between 7.2 million (5) and 10 million (106). Even these, however, may represent only part of the picture, not being based on an analysis of the actual health workforce requirements to attain high and effective coverage of the broader range of health services that are required to ensure healthy lives for all.

The implications of the global strategy on human resources for health need to be better understood, quantified and costed. Realistically, the scale-up required to address existing shortfalls and the expected turnover is greater than existing estimates, and will imply the need to train and deploy up to 40–50 million new health and social services workers globally in the coming decades (47). While this represents an opportunity from the perspective of creation of qualified jobs, realizing it will require tailoring public sector policies at national and international levels to enable the investment decisions required. Cognizant of the existence of different estimates, their limitations and alternative models to develop them, the Board of the GHWA calls upon WHO and the World Bank to collaborate towards the development of costed estimates of health workforce requirements for the successful

implementation of a global strategy on human resources for health, factoring in both capital investments and recurrent costs. Building on this, a financing plan should be defined on how investments will be pledged and coordinated to meet needs.

Fit-for-purpose financing mechanisms and governance arrangements are required at both national and international levels. All countries need to allocate an adequate proportion of their health resource envelope to training and remuneration of health workers. The chronic underinvestment in education of health workers in some high-income countries is contributing to permanent shortage (as defined by market-based demand), driving migration of health workers from low- and middle-income countries. Globally, many countries are failing to invest adequately in their health systems (64), with investments in the health workforce being lower than is often assumed (62). National investments in the health workforce are sometimes negatively affected by the relatively limited power of ministries of health, and the dispersion of responsibilities among different sectors (with the finance sector controlling overall investment levels, the education sector setting policies and investment decisions concerning pre-service training, and other institutions setting working and labour conditions or remuneration levels for all civil servants, including health workers). Responsibility for adequate investments in the health workforce therefore rests with heads of government, who should lead efforts to coordinate and align the actions of different sectors and constituencies. Their action can be reinforced by adequate accountability mechanisms through parliament and civil society.

International mechanisms for development assistance for health should be reformed to allow sustained investment in both capital and recurrent costs for HRH. Evidence accumulated in the last decades demonstrates that the international architecture and global health initiatives are not fit for purpose (107). The capacity for individual States to provide a sustainable health workforce is closely linked to their capacity to claim and define fiscal space for health in both national and international negotiations (108). The recent decisions by the International Monetary Fund to relax policy conditionalities to allow greater investments in the social services represent in this context a welcome step, but much remains to be done to translate the new policy direction into reality and reverse the losses in public sector investment and capacity accrued over the past decades (109). Several low-income countries and fragile States will still require overseas development assistance for a few more decades; the aid architecture, however, is not well structured to effectively deliver assistance for health system strengthening, and health workforce investment in particular. A narrow focus on selected diseases, the short-term nature of the support provided and lack of coordination with national governments have been documented to represent

an ineffective approach to strengthen sustainably HRH (110, 111). It is necessary that going forward global health initiatives and development partners establish governance mechanisms so that all grants and loans include an impact assessment of the health workforce implications, and a deliberate strategy on how specific programming will contribute to strengthening HRH (51), adapting their funding and lending strategies as required. Development partners should coordinate their investments for HRH, including at the regional and country levels, and align it to long-term national needs, supporting capacity-building at the institutional (governance and regulation), organizational (relevant ministries and agencies, councils, associations, accreditation bodies and education institutions) and individual levels (transfer of competencies and access to knowledge through modern learning tools) in countries (5). The establishment of a multilateral funding facility to support international investment in health systems, including both capital and recurrent costs for HRH, would represent a possible solution to overcome many years of disjointed and fragmented efforts (112). National sector plans should serve as a basis for harmonization and alignment of domestic and international HRH investment.

5

The need for a fit-for-purpose global architecture for HRH

Transnational challenges will continue after 2015, and demand a revamping of global HRH governance. Political commitment and action at the country level are the foundations of any effective response to health workforce challenges. However, some HRH issues, such as the creation and sharing of global public goods to disseminate good practices and evidence, and the provision or mobilization of technical and financial assistance, are transnational, and require a global approach underpinned by a commitment to international solidarity. The paradigm shifts required at the country level can be enhanced if accompanied by a corresponding transformation of global governance for HRH. Despite representing a critical pathway for the attainment of any health goals, the health workforce implications are often not considered when setting public health goals. Aspirational targets were set for the Millennium Development Goals and within the context of a number of strategies and action plans for various disease priorities, but without due regard to their feasibility and implications from a health workforce perspective; health workforce data are typically fragmented, out of date and unreliable, hampering efforts at tracking progress and exercising accountability; there is no dedicated international funding mechanism to support health workforce investment, and the only entity with a dedicated mandate to address global health workforce challenges has seen the effectiveness of its operations undermined by recurrent shortfalls of its resource base (113). In addition, the implementation of the main international normative instrument on health workforce issues, the WHO Global Code of

Practice on the International Recruitment of Health Personnel, remains uneven (see box 3).

The health workforce implications should always be examined before any health goals are considered and adopted. There is a need to stimulate demand for and proactive use of health workforce data in international public policy, encouraging a global discourse on assessment of the health workforce implications of any public health objective; this, in turn, will trigger demand for and analysis of workforce data, particularly on global health initiatives and programming linked to the future health target(s) in the sustainable development goals and universal health coverage. WHO Member States should consider establishing a governance mechanism so that all future resolutions presented at the World Health Assembly and regional committees include an assessment of the health workforce implications resulting from the technical or policy recommendations (51).

A functioning and fit-for-purpose mechanism for global governance for HRH is needed. Its key roles in the post-2015 era will include to inform high-level political engagement and intersectoral and multilateral policy dialogue, and to foster global coordination and mutual accountability, effectively linked with United Nations system processes and mechanisms for monitoring of universal health coverage and sustainable development goals, and operating in close coherence with existing multilateral human rights frameworks and institutions.

BOX 3. The global health labour market and international migration of health workers

Despite considerable advances in the last decade, there is scope to better understand and to improve the response to the negative effects of international migration of health workers. Evidence on international health workforce migration remains highly fragmented and incomplete. There is however a greater appreciation that cross-national mobility of health workers is just one of several potentially important workforce flows: a narrow focus only on international flows, but ignoring movements and skills mix imbalances within national labour markets, risks missing the complete picture, may overstate the significance of international migration and may lead to policy misalignment.

The global financial crisis has had an impact on patterns of health worker migration, which fell in the three years immediately after the crisis year of 2008. With economic recovery, overall patterns of inflow migration to Organisation for Economic Co-operation and Development (OECD) countries are now increasing, notably in the European Union, despite tightening of immigration policies by some countries attempting to protect domestic labour. International recruitment is a policy that has been actively pursued in the past, and will probably remain a policy choice to address projected future shortages in some high-income countries (114).

The adoption of the WHO Global Code of Practice on the International Recruitment of Health Personnel marked a watershed in policy focus on the issue of health worker migration. The code sets out a voluntary policy approach to the issue of health worker migration at national and international level. It recognizes the complexities and dynamics of migration, emphasizes the need for more effective monitoring and analysis of trends, and places migration in a broader health workforce policy and planning context. It underlines the importance of principles of international solidarity, transparency, fairness and sustainability, and it promotes fair labour practices and the recognition of rights of migrant health workers. However, this normative instrument is not being used to full effect: despite some positive examples of its application (115), its uptake has been uneven, and renewed political and technical commitment at the national, regional and global levels is crucial to ensure that its provisions translate into improved health workforce policy dialogue and planning in countries. The review of the relevance and effectiveness of the WHO Global Code of Practice on the International Recruitment of Health Personnel in 2015 represents a critical opportunity to take stock of lessons learned and reflect them in augmented implementation efforts going forward. The future policy discourse on health worker migration should also examine the expected effects of international trade agreements, recognizing that health workers should not be seen as a tradable commodity in the global labour market, but rather that they represent an indispensable asset for national health systems (108).

6

Call to action

The Board of the GHWA, recognizing human resources for health issues as a challenge as well as an opportunity for countries at all levels of socioeconomic development, encourages concerted efforts at national and international level in support of bold and transformative action on the health workforce as a critical strategy for both the attainment of health outcomes and wealth creation. In particular we call for:

A paradigm shift to recognize the health workforce as a productive investment rather than an expense to curtail. Ministries of finance, regional development banks, the World Bank and the International Monetary Fund should recognize investment in the health workforce as a productive sector, with the potential to create tens of millions of new jobs and capable of unleashing economic growth and broader socioeconomic development, and adapt their macroeconomic policies to allow greater investment in social services.

A massive increase in public sector resource allocation and international financing to meet health workforce requirements based on current and future health needs.

- High-income countries should take corrective action to address future imbalances in their health labour markets, planning for investments that allow self-sufficiency, as far as possible.
- Low-income, least developed and fragile States should be supported in correcting the fundamental mismatch between demand and needs in their national health labour market through economic plans supporting ambitious health workforce investment, to ensure that no one is left behind in the advance towards equity and universal

health coverage. These investments should be co-funded by the international community to complement domestic resources mobilized; channelled through enhanced financing mechanisms that enable sustainable and long-term investment in capital and recurrent costs for the health workforce, in alignment with national needs; and target capacity-building efforts at institutional, organizational and individual levels.

Dramatic improvements in the efficiency of spending on HRH.

- Countries at all levels of socioeconomic development should adopt a health care delivery model and a diverse and sustainable skills mix responding to country needs, aligning market forces and population expectations towards a primary health care approach, supported by effective referral to secondary care, but avoiding an overreliance on highly specialized and costly tertiary care.
- Ministries of health and education, academic institutions, professional associations and regulators should overhaul health education strategies and embed them within broader health planning, embracing a new and more effective education paradigm that prepares health workers to meet the needs of their communities, harnessing the potential of new technology-enabled delivery platforms.
- Ministries of health, civil service commissions and employers should adapt employment conditions, remuneration and non-financial incentives to ensure fair terms for health workers, merit-based career development opportunities and a positive practice environment

to enable their effective deployment, retention and adequate motivation to deliver quality care.

Better availability and use of HRH data and evidence, and enhanced governance and accountability mechanisms at national and global levels, will be critical enablers of the actions above. We call upon:

- capacity-building efforts to explicitly target creating institutional capacity for effective stewardship and improved governance of the HRH agenda by national authorities;
- country authorities to coordinate the development of national health workforce accounts, as a basis for evidence-based planning and policy-making;
- Heads of Government and Heads of State to take direct responsibility for and accept accountability on health workforce investments and development efforts;
- international agencies and development partners to streamline and enhance the global governance for HRH, moving towards the systematic assessment of health workforce implications of health goals, and collaborating through a mechanism that can inform high-level political engagement and intersectoral and multilateral policy dialogue, and foster global coordination and mutual accountability.



Accountability framework

The global strategy on human resources for health should include both targets and an accountability framework consistent with the overarching vision for 2030 of Member States. The identification of a benchmark of health workforce concentration required to deliver on the health priorities of the post-2015 agenda, the corresponding quantification of current and projected health workforce shortfalls, and the development of cost estimates to achieve the required scale-up should translate into the development of targets to be included in the global strategy on human resources for health. With the objective that by 2030 all communities should have access to trained and supported health workers with a minimum core set of competencies, examples of such targets might include the following:

- by 2030, 50% of countries deemed in 2015 to have a shortage against the identified benchmark for health worker concentration have reached or surpassed it;
- by 2030, 80% of countries deemed in 2015 to have a shortage against the identified benchmark are demonstrating a trend towards improving health worker concentration;
- by 2030, 80% of countries allocate at least X% of their GDP to health worker production and deployment;
- by 2030, 80% of countries have established national health workforce accounts and 80% of these report on a yearly basis to the WHO Secretariat on a minimum set of core HRH indicators.

The global strategy on human resources for health should incorporate an accountability framework to track implementation towards the attainment of these targets, assessing progress at the various levels (country, regional, global) at which its recommendations apply.

At the country level, the recommendations of the global strategy on human resources for health should be embedded in national health and development strategies and plans.

Specific HRH targets and indicators should be included in relevant national policies, strategies and development frameworks, and multisectoral and multiconstituency mechanisms strengthened to reflect the key HRH interventions and accountability points from inputs to impact (116). Existing processes and mechanisms for health sector review at country level should include a regular assessment of progress in advancing the health workforce agenda in the national context, including through the role of national parliaments or other relevant institutional entities for government oversight, and complementary mechanisms supported by civil society. Strengthening health workforce data and analysis systems through the development of national health workforce accounts represents a precondition to allow an evidence-based and quantitative assessment of progress. Coordination platforms at the country level for intersectoral and stakeholder coordination, policy dialogue and accountability should be established or revamped. Accountability *for* HRH at the national level should be accompanied by mechanisms for accountability *of* HRH at the grass-roots level, harnessing the voice and capacity of communities and service users to generate feedback loops to improve quality of care and patient safety. The development of regional roadmaps and action plans may serve as

an opportunity for coordination, mutual support and joint commitment among countries that share similar cultural or health system features, or common geopolitical interests.

Global accountability should include regular reporting by countries on core HRH indicators, and be linked and synchronized with the accountability framework of the emerging sustainable development goals. WHO should facilitate a process for countries to report on a yearly basis on a minimum set of core HRH indicators, including information on health workforce production, availability, composition, distribution

and migratory flows (117). The latter will also allow deepening and institutionalizing the monitoring of the implementation of the WHO Code of Practice on the International Recruitment of Health Personnel. Member States should also request the United Nations Secretary-General's office to ensure the sustainable development goal accountability framework includes recommendations and targets on the health workforce implications of the health goal. In turn, the adoption of the sustainable development goals in September 2015 by the United Nations General Assembly should inform the vision of the global strategy on human resources for health, and guide its finalization.

ENDNOTE

In the context of this document, health workers are defined as “all people engaged in actions whose primary intent is to enhance health” (*World health report 2006*). This includes physicians, nurses and midwives, but also laboratory technicians, public health professionals, community health workers, pharmacists, supply chain managers, physical therapists, dentists and oral health professionals, and all other support workers whose main function relates to delivering or supportive the provision of preventive, promotive or curative health services. Health workers typically operate in collaboration with the wider social services workforce, which is responsible for ensuring the welfare and protection of socially or economically disadvantaged individuals and families. A closer integration of the health and social services workforces can also improve long-term care for ageing populations.

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