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REPORT ON THE DEVELOPMENT OF THE GLOBAL STRATEGY ON HUMAN RESOURCES FOR HEALTH: WORKFORCE 2030

Background

1.   In May 2014, the 67th World Health Assembly endorsed the Recife Political Declaration on Human Resources for Health: renewed commitments towards universal health coverage *(1)*, and adopted a resolution requesting the Director-General to develop and submit a new global strategy for human resources for health to be considered by the Sixty-ninth World Health Assembly in May 2016. The purpose of the global strategy is to address the challenges faced by Member States in human resources for health policies, plans, and strategies and to support their progress towards universal health coverage.

2.   In 2014, the 53rd PAHO Directing Council adopted Resolution CD53.R14, Strategy for Universal Access to Health and Universal Health Coverage *(2)*, urging Member States to:

a)   define and implement a set of actions to strengthen the governance and stewardship capacity of the health sector; and exercise leadership to impact on policies, plans, legislation, regulations, and actions beyond the health sector that address the social determinants of health; and

b)   improve human resource capacity at the first level of care, increasing employment opportunities with attractive labor conditions and incentives, particularly in underserved areas; consolidate collaborative multidisciplinary health teams; ensure that these teams have access to health information and telehealth services (including telemedicine); and introduce new professional and technical profiles and strengthen existing ones, coherent with the model of care to be implemented to achieve universal access to health and universal health coverage.

Purpose

3.   The purpose of this document is to present the draft global strategy (Annex) to the 54th Directing Council and inform Member States ahead of discussions at the Sixty-ninth World Health Assembly in May 2016.

4.   The global strategy represents a critical component of the WHO strategic vision towards universal health coverage and health systems strengthening, responding to the health-related post-2015 sustainable development agenda. The global strategy will inform the discussions on the WHO Global Code of Practice on the International Recruitment of Health Personnel *(3)*. The second round of reporting on its implementation is also scheduled for the Sixty-ninth World Health Assembly.

5.   WHO has organized a web consultation from July to September 2015 to seek contributions to the draft global strategy and broaden ownership amongst a wide range of stakeholders (Member States, academic institutions, health care professional associations, civil society representatives, and multilateral and bilateral agencies). In addition, WHO will present the draft global strategy at the PAHO/WHO Regional Meeting on Human Resources for Health in Buenos Aires, Argentina in September 2015. The report of this meeting will be submitted to WHO as part of the regional contribution to the development of the global strategy.

6.   Within the Region of the Americas, the global strategy constitutes an important input to the development of the post-2015 Human Resources for Health Regional Agenda that follows from the assessment of the Regional Goals for Human Resources for Health 2007-2015: Final Report *(4)*.

Action by the Directing Council

7.   The Directing Council is invited to make observations that it considers pertinent on the draft Global Strategy on Human Resources for Health: Workforce 2030.

Annex: A Global Strategy on Human Resources for Health: Workforce 2030. Draft for Consultation

References

1.   World Health Organization. Follow-up of the Recife Political Declaration on Human Resources for Health: renewed commitments towards universal health coverage [Internet]. 67th World Health Assembly (Ninth plenary meeting; 2014 May 24); 2014 May 19-24. Geneva, Switzerland. Geneva: WHO; 2014 (Resolution WHA67.24) [cited 2015 Jul 15]. Available from: http://apps.who.int/gb/ebwha/pdf_files/WHA67-REC1/A67_2014_REC1-en.pdf

2.   Pan American Health Organization. Strategy for universal access to health and universal health coverage [Internet]. 53rd Directing Council of PAHO, 66th session of the WHO Regional Committee for the Americas; 2014 Sep 29-Oct 3; Washington (DC), United States. Washington (DC): PAHO; 2014 (Document CD53/5, Rev. 2) [cited 2015 Jul 15]. Available from: http://www.paho.org/hq/index.php?option=com_docman&task=doc_download&gid=27312&Itemid=270&lang=en

3.   World Health Organization. WHO global code of practice on the international recruitment of health personnel [Internet]. 63rd World Health Assembly (Eighth plenary meeting; 2010 May 21); 2010 May 17-21. Geneva, Switzerland. Geneva: WHO; 2010 (Resolution WHA63.16) [cited 2015 Jul 15]. Available from: http://apps.who.int/gb/ebwha/pdf_files/WHA63-REC1/WHA63_REC1-P2-en.pdf

4.   Pan American Health Organization. Regional goals for human resources for health 2007-2015: final report [Internet]. 54th Directing Council of PAHO, 67th session of the WHO Regional Committee for the Americas; 2015 Sep 28-Oct 2; Washington (DC), United States. Washington (DC): PAHO; 2015 (Document CD54/INF/1).

Global Strategy on Human Resources for Health:
Workforce 2030

DRAFT
for consultation

World Health Organization

Introduction

1. The zero draft of the *Global Strategy on Human Resources for Health: Workforce 2030* forms the basis of consultations with WHO Regions, Member States and other partners in the period June – August 2015. This global dialogue will inform the continuing improvement of the draft and a final version to be submitted to the WHO Executive Board in January 2016.

2. WHO has been setting the agenda on health workforce issues since the World Health Report 2006 – Working Together for Health, which generated unprecedented attention to human resources for health (HRH). The report called for a decade of action on HRH, and acted as a catalyst for numerous policy initiatives and the adoption of several resolutions on this matter: WHA63.16 - WHO Global Code of Practice on the International Recruitment of Health Personnel (2010); WHA64.6 - Health workforce strengthening (2011); WHA64.7 - Strengthening nursing and midwifery (2011); WHA66.23 - Transforming health workforce education in support of universal health coverage (2013), and; WHA67.24 – Follow-up of the Recife Political Declaration on Human Resources for Health: renewed commitments towards universal health coverage (2014). The 68th World Health Assembly in 2015 reiterated the centrality of the health workforce across different areas of work of WHO, including the discourse on resilient health systems and the resolutions on surgical care and the global emergency health workforce, among others.

3. WHO has also spearheaded global policy dialogue on Universal Health Coverage (UHC)[1] through the World Health Report 2010 – Health System Financing: the Path to Universal Coverage. In 2013, the Third Global Forum on Human Resources for Health adopted the Recife Political Declaration on HRH, which recognized the key role of the health workforce in attaining UHC. Resolution WHA67.24 in May 2014 endorsed the Recife Political Declaration, and requested the Director General to develop a global strategy on human resources for health, for consideration by WHO Member States at the 69th World Health Assembly in May 2016.

4. The *Global Strategy on Human Resources for Health: Workforce 2030* is primarily aimed at planners and policy makers of WHO Member States, but its contents will also be of relevance to other partner and stakeholders active in the health workforce area, including public and private sector employers, professional associations, education and training institutions, labour unions, bilateral and multilateral development partners, international organizations, civil society.

5. This new mandate given to the WHO Secretariat builds on and reinforces an initiative facilitated in 2013 by WHO and the Board of the Global Health Workforce Alliance (GHWA), which entailed the synthesis of the contemporary body of evidence that sets out the future challenges for health workforce development in the period 2016–2030.[2] The WHO Secretariat has capitalised on the broad-based consultation, the thematic papers, synthesis *(1)* and Board recommendations in the development of this zero draft.

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1 Throughout this document, the understanding of the concept of Universal Health Coverage entails a recognition that this term may have different connotations in countries and regions of the world. In particular, it is noted that in the PAHO - WHO Regional Office for the Americas – approach, UHC forms part of the broader concept of Universal Access to Healthcare.

2 Available at: http://www.who.int/hrh/documents/synthesis_paper_them2015/en/

Global Strategy on Human Resources for Health:
Workforce 2030

VISION

Accelerate progress towards Universal Health Coverage and the Sustainable Development Goals by ensuring equitable access to a skilled and motivated health worker within a performing health system.

OVERALL GOAL

To ensure availability, accessibility, acceptability and quality of the health workforce through adequate investments and the implementation of effective policies at national,[1] regional and global levels, for ensuring healthy lives for all at all ages, and promoting equitable socio-economic development through decent employment opportunities.

[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.

PRINCIPLES

- Support governments to build optimal health workforce models for the provision of people-centred integrated health services, responsive to patients' sociocultural expectations, and empowering and engaging communities to be active participants in the health care production process.
- Guarantee the right of health workers to be free from gender discrimination and violence in the work place, and ensure 'decent work for all'.
- Facilitate the integration of health and social care services through a holistic approach centred on population needs.
- Promote international collaboration and solidarity based on mutual interest and shared responsibility, and ensure ethical recruitment practices.
- Mobilize political commitment and foster collaboration across sectors and constituencies (including public and private) for effective HRH action.
- Ensure WHO support on normative aspects and technical cooperation is coherent and integrated at all levels of the organization.

OBJECTIVES

1. To implement evidence-based HRH policies to optimize impact of the current health workforce, ensuring healthy lives, effective Universal Health Coverage, and contributing to global health security.

2. To align HRH investment frameworks at national and global levels to future needs of the health systems and demands of the health labour market, maximizing opportunities for employment creation and economic growth.

3. Build the capacity of national and international institutions for an effective leadership and governance of HRH actions.

4. To ensure that reliable, harmonized and up-to-date HRH data, evidence and knowledge underpin monitoring and accountability of HRH efforts at national and global levels.

GLOBAL TARGETS

1.1. All countries: by 2030, 80% of countries have halved disparity in health worker distribution between urban and rural areas.

2.1. All countries: by 2030, 80% of countries allocate at least [xx]% of their GDP to health worker production, recruitment, deployment and retention, within a balanced allocation taking into account other health and social development priorities.

2.2. High and middle-income countries: by 2030, all countries meet at least 90% of their health personnel needs with their own human resources for health, in conformity with provisions of the WHO Code of Practice on International Recruitment of Health Personnel.

2.3. Low-and middle-income countries: by 2030, to create, fill and sustain at least 10 million additional jobs in the health and social care sectors to address unmet needs for the equitable and effective coverage of health services.

2.4. High-income countries: to ensure that by 2030 all OECD countries can demonstrate allocating at least 25% of all development assistance for health to HRH.

3.1. All countries: by 2030, 80% of all countries have institutional mechanisms in place to effectively steer and coordinate an inter-sectoral health workforce agenda.

4.1. All countries: by 2030, 90% of countries have established mechanisms for HRH data sharing through national health workforce accounts, and report on a yearly basis core HRH indicators to WHO Secretariat and publish them.

CORE WHO SECRETARIAT ACTIVITIES IN SUPPORT OF THE STRATEGY IMPLEMENTATION

Develop normative guidance, support operations research to identify evidence-based policy options, and provide technical cooperation – as may be relevant to the needs of Member States – on health workforce education, scope of practice of different cadres, evidence-based deployment and retention strategies, quality control and performance enhancement approaches, including regulation.

Provide normative guidance and technical cooperation on health workforce planning and forecasting, health labour market analysis, costing of national HRH strategies.

Strengthen evidence and adoption of macro-economic and funding policies conducive to greater and more strategically targeted investments in HRH.

Provide Member States with technical cooperation and capacity building to develop core competencies in HRH policy, planning and management.

Foster effective coordination, alignment and accountability of the global HRH agenda by facilitating a network of international HRH stakeholders actors.

Assess systematically the health workforce implications resulting from the technical or policy recommendations presented at the World Health Assembly and regional committees.

Develop, review the utility of, update tools, guidelines and databases relating to HRH data and evidence.

Facilitate a process for countries to report to WHO Secretariat on a yearly basis on a minimum set of core HRH indicators as a basis for a performance and accountability framework of this strategy.

Support countries to strengthen quality and completeness of national health workforce data.

Streamline and integrate all HRH reporting requirements by WHO Member States.

Adapt, integrate and link the monitoring of targets in the Global Strategy on HRH to the emerging accountability framework of the Sustainable Development Goals.

Overview
The 21st century context for a progressive health workforce agenda

1. **Health systems can only function with health workers; improving health services coverage and health outcomes is dependent on their availability, accessibility, acceptability and quality.** *(2)* (Figure 1). However, countries at all levels of socioeconomic development face, to varying degrees, difficulties in the education, deployment, retention, and performance of their workforce. Health priorities of the emerging post-2015 development framework – such as ending the AIDS, tuberculosis and malaria epidemics, achieving drastic reductions in maternal mortality, ending preventable deaths of newborns and under-5 children, guaranteeing universal health coverage – will remain aspirational unless accompanied by strategies involving transformational efforts on health workforce capability. Furthermore, every Member State 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; *(13)* this in turn requires a skilled, trained and supported health workforce. *(4)*

Figure 1. Human resources for health: availability, accessibility, acceptability, quality and effective coverage
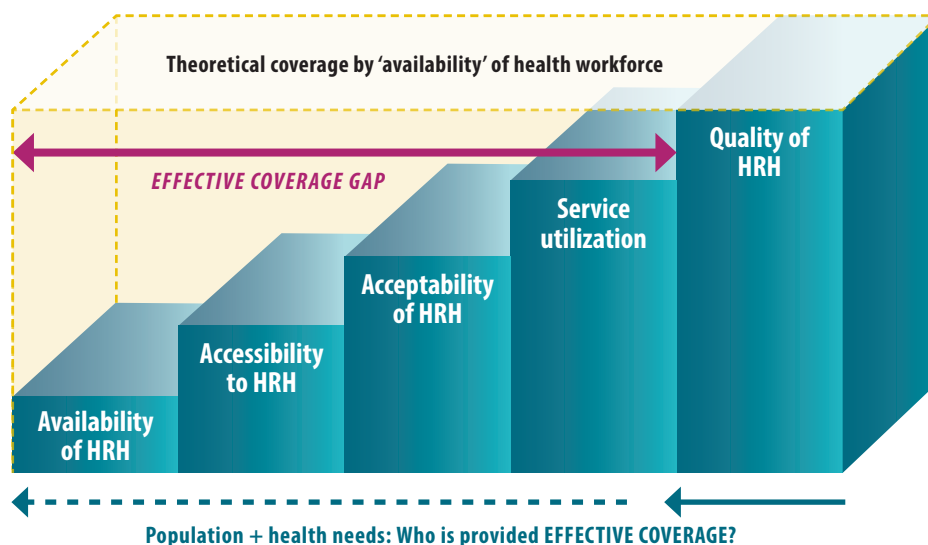
Source: Campbell et al, 2013.

2. **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. *(5, 6)* 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. *(7)* 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 health system agenda and its critical HRH component. *(8, 9)*

3. **The health workforce will be critical to achieving health and wider development objectives in the next decades.** The United Nations Secretary-General is facilitating a process to identify a new set of Sustainable Development Goals (SDGs) for 2016–2030. The SDGs follow the Millennium Development Goals of the period 2000–2015, with a call to action to people and leaders across the world to ensure a life of dignity for all. *(10)* The health workforce is a critical part of the proposed health goal, with a target to "increase substantially… the recruitment, development and training and retention of the health workforce in developing countries, especially in Least Developed Countries and Small Island Developing States". In 2015, the World Health Assembly recognized that the health goal and its 13 health targets under consideration in the proposed SDGs – including a renewed focus on equity and universal health coverage – will only be attained through substantive and strategic investments in the global health workforce. Through the adoption of resolution WHA67.24 Member States requested the Director General of the World Health Organization to develop a Global Strategy on Human Resources for Health and submit this to the Sixty-ninth World Health Assembly in May 2016. *(11)*

4. **Globally, many countries are failing to support adequately their health systems, with actual investments in the health workforce being lower than is often assumed.** *(12)* The chronic underinvestment in education and training of health workers in some high-income countries is resulting in permanent shortage (as defined by market-based demand), and contributing to international recruitment of health workers from low resource settings (some low-income countries lose up to 50% of their graduates to international migration). In low- and middle-income countries, in addition to major under-investment in education, imbalances between supply capacity and the market-based demand determined by fiscal space, and in turn between demand and population needs, result in challenges in providing equitable and effective coverage of essential health services, and sometimes in the paradoxical situation of health worker unemployment co-existing with major unmet health needs.

5. **The foundation for a strong and effective health workforce able to respond to the 21st century priorities requires matching effectively the supply and skills of health workers to population needs, now and in the future.** Evolving epidemiologic profiles and population structures are increasing the burden of noncommunicable diseases and chronic conditions on health systems throughout the world. *(13)* This is accompanied by a progressive shift in the demand for patient-centred health services and personalized care. *(14)* 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. The demand for the global health workforce is therefore expected to grow substantially as a consequence of population and economic growth, combined with demographic and epidemiologic transitions. Attaining the necessary quantity, quality and relevance of the health workforce will require that policy and funding decisions are aligned with these new needs.

6. **Persistent health workforce challenges, combined with these broader macro-trends, require the global community to re-appraise the effectiveness of past strategies, and adopt a paradigm shift in how we plan, educate, deploy and reward health workers.** Transformative advances are both needed and possible through the adoption of inclusive models of care encompassing promotive, preventive, curative and rehabilitative services, in reorienting health systems towards a primary care approach, and by fully harnessing the potential stemming from technological innovation. In parallel, much-needed investments in the health workforce can also be leveraged for the creation of qualified employment opportunities, in particular for women and youth. 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. Realizing this potential hinges on the mobilization of political will and building institutional and human capacity for the effective implementation of this agenda.

7. **The vision that by 2030 all communities should have access to trained and supported health workers with a minimum core set of competencies, requires combining the adoption of effective policies at national, regional and global levels with adequate investment levels to address unmet needs.** Realistically, the scale-up required in the coming decades to meet increasing demand, address existing gaps and counter expected turnover is greater than all previous estimates. Projected requirements developed by WHO and the World Bank (Annex 1) to attain high and effective coverage of the broader range of health services that are required to ensure healthy lives for all imply the need to train and deploy 40–50 million new health and social care workers globally, *(15)* including at least 10 million additional health workers in low- and middle-income countries.

8. **We have long known what needs to be done to address critical health workforce bottlenecks; but we have now better evidence than ever before on how to do it.** The WHO *Global Strategy on Human Resources for Health: Workforce 2030* 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, and refers to the tools and guidelines that can support policy development, implementation and evaluation in these various areas (Annex 2). The Global Strategy addresses in an integrated way all these aspects in order to inspire and inform more incisive, multi-sectoral action, based on new evidence and best practices, at national level by planners and policy makers, and at regional and global level by the international community. Given the inter-sectoral nature and potential impacts of health workforce development, the Global Strategy is meant to inform and inspire the development of national health and HRH strategies, but also the broader socio-economic development frameworks that countries adopt.

9. **As HRH represent a cross-cutting enabler to many service delivery priorities, this strategy complements and reinforces a range of related strategies** produced by WHO and the United Nations, reaffirming in particular the importance of the WHO Global Code of Practice on the International Recruitment of Health Personnel, *(16)* as well as supporting the goals and principles of the United Nations Global Strategy for Women's, Children's and Adolescents' Health, *(17)* the WHO Strategy for People-Centred and Integrated Health Services, *(18)* the Every Newborn Action Plan, *(19)* the Family Planning 2020 objectives, *(20)* the Global Plan towards the Elimination of New HIV Infections *(21)* , the emerging UNAIDS 2016–2021 strategy, *(22)* and the Global Action Plan for the Prevention and Control of Noncommunicable Diseases, *(23)* amongst others.

10. **This is a cross-cutting agenda which represents the critical pathway to the attainment of coverage targets across all service delivery priorities.** It affects not only physicians, nurses and midwives, but all health workers, including but not limited to: public health professionals, community-based and mid-level practitioners, pharmacists, laboratory technicians, supply chain managers, physical therapists, dentists and oral health professionals, and other allied health professions and support workers. And it also relates to the wider social services workforce, recognizing that closer integration of the health and social services workforces can also improve long-term care for ageing populations.

11. **The Global Strategy on Human Resources for Health outlines policy options for WHO Member States, responsibilities of the WHO Secretariat and recommendations for other stakeholders** on how to:
   □ Optimize the current workforce to accelerate progress towards Universal Health Coverage and the Sustainable Development Goals (Objective 1);
   □ Understand and prepare for future needs of health systems, harnessing the growth in health labour markets to maximize job creation and economic growth (Objective 2);
   □ Build the institutional capacity to implement this agenda (Objective 3); and
   □ Strengthen HRH data for monitoring and accountability of the successful implementation of both national strategies and the Global Strategy itself (Objective 4).

Objective 1

To implement evidence-based HRH policies to optimize impact of the current health workforce, ensuring healthy lives, effective Universal Health Coverage, and contributing to global health security

TARGET 1.1.
By 2030, 80% of countries have halved current levels of disparity in health worker distribution between urban and rural areas.

12. **Addressing population needs for UHC and the SDGs requires making the best possible use of limited resources, ensuring they are employed strategically through adoption and implementation of evidence-based health workforce policies tailored to the local context.** The ongoing challenges of health workforce deficits and imbalances, combined with ageing populations and epidemiologic transformations, imply that the attainment of health goals with unprecedented levels of ambition requires a new, contemporary agenda on HRH. The universal health coverage paradigm requires recognizing that the provision of integrated and people-centred health care services can benefit from the provision of team-based care at the primary level, harnessing the potential contribution of different typologies of health workers, operating in closer collaboration and according to a more rational scope of practice. This translates into a need for the adoption of more effective and efficient strategies and appropriate regulation for health workforce education, a more sustainable and responsive skills mix, improved deployment strategies and working conditions, reward systems, continuous professional development opportunities and career pathways for human resources for health, so as to enhance both capacity and motivation for improved performance.

13. **Dramatic improvement in efficiency can be attained by strengthening national institutions to enable them to devise and implement more effective strategies and appropriate regulation for the health workforce.** There are major opportunities to ensure a more effective and efficient use of resources by adopting a health care delivery model and a diverse and sustainable skills mix geared to a primary health care approach, and supported by effective links to the social services workforce and referral to secondary care. Similarly, major gains are possible in performance and productivity by improving management systems and working conditions for HRH, and by harnessing the full potential of collaboration with the private sector, incentivizing and aligning its operations to public sector health goals. Realizing these efficiency gains requires the institutional capacity for the implementation, assessment and improvement of HRH planning, education and management policies.

Policy options for WHO Member States[1]

All countries

14. **Strengthen contents and implementation of HRH plans as part of national health policies and strategies.** This will benefit from intersectoral dialogue and alignment among relevant ministries (health, labour, education, finance, etc), other constituencies and the private sector, and local government authorities. It is particularly important to find pragmatic solutions to overcome deeply entrenched rigidities in public sector rules and practices that hinder the adoption of adequate reward systems, working conditions and

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1 Most of the proposed policy options in this section and in the subsequent ones are of general relevance and may be considered by countries at all levels of socio-economic development. Where some policy options might be particularly pertinent to countries in specific income groups or in fragile contexts, this has been explicitly indicated. This distinction should not be interpreted as a rigid one, considering that the situation of countries can change over time, and that similar health workforce and health systems challenges may apply in different settings, albeit with context-specific implications on funding, employment and labour market dynamics.

career structures for health workers: 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.

15. **Ensure the effective use of available resources.** Globally between 20% and 40% of all health spending is wasted, and health workforce inefficiencies are responsible for a large proportion of that. *(24)* Accountability systems should be put in place to improve efficiency of health and HRH spending. In addition to measures such as excising ghost workers from the public sector payroll, *(25)* it will be critical to adopt appropriate and cost-effective approaches to provide community-based, person-centred, continuous and integrated care. This entails implementing health care delivery models with an appropriate and sustainable skills mix in order to equitably meet population health needs. Health systems should therefore align market forces and population expectations towards UHC and people-centred integrated service delivery, supported by a primary health care approach and effective referral to secondary and specialized care, while avoiding over-medicalization.

16. **Link the training of and public sector investments in health personnel with population needs and health system demands, adopting a coordinated approach to HRH planning and education**, including in support of an adequate and gender-balanced education pipeline of qualified trainees from rural areas, and encouraging inter-professional education and collaborative practice. Radical improvements in the quality of the workforce are possible by implementing a transformative education agenda, *(26)* based on competency-based learning, and which should equip health workers with knowledge and skills on social determinants of health and public health. This must include epidemic preparedness and response to advance the global health security agenda and the implementation of the International Health Regulations. Equally critical is nurturing in health workers the professional values and attitudes requisite to deliver responsive and respectful care, taking into particular account the need to eliminate discrimination related to gender, ageing, mental health, sexual and reproductive health and HIV and AIDS. Advancing this agenda requires building capacity of regulation and accreditation authorities for improved development and enforcement of standards and regulations, and introducing competency-based national licensing and relicensing assessments for graduates from both public and private institutions. Opportunities for North-South and South-South collaboration on training and investment should be considered.

17. **Optimize health worker motivation, satisfaction, retention and performance** through an integrated package of attraction and retention policies, including job security, a manageable workload continuing education and professional development opportunities, enhanced career development pathways, family and lifestyle incentives, hardship allowances, housing and education allowances and grants. Critical to ensuring equitable deployment of health workers are the selection of trainees from and delivery of training in rural and underserved areas, financial and non-financial incentives, regulatory measures or service delivery reorganization. *(27)*

18. **Harness – where feasible and cost-effective – information and communication technology (ICT) opportunities**, in particular in relation to e-learning, electronic health records, clinical decision-making tools, supply chain management, performance management and feedback loops and service quality control. *(28)* Standards and accreditation procedures should be established for the certification of training delivered through blended approaches that include e-learning, appropriate regulations for the provision of m-Health services, and for the handling of workforce data that respects confidentiality requirements. *(29)*

19. **Build greater resilience and self-reliance in communities**, engaging them in shared decisions and choice, and empowering patients and their families with knowledge and skills to encourage them to become assets to a health system, actively collaborating in the production of care, rather than being passive recipients of services.

High-income countries

20. **Correct the configuration and supply of specialists and generalists**, advanced practitioners and other cadres – through appropriate planning and education strategies and incentives, adequate investments in general practice and family medicine, with the objective of providing community-based, person-centred, continuous and integrated care .

21. **Maintain, improve or institute routine and systematic mechanisms to improve health workforce quality, performance and distribution**, including through adequate deployment and retention.

Low- and middle-income countries

22. **Strengthen the capacity and quality of education institutions and their faculty through accreditation of training schools and certification of diplomas** to meet current and future education requirements to respond to population health needs. In some contexts this may entail redesigning health workforce intake approaches through joint education and health planning mechanisms. Particularly in some low-income countries there is a need to renew focus on primary and secondary education 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.

23. **Ensure that the foreseen expansion of the health resource envelope leads to cost-effective resource allocation, and specifically to prioritise the deployment of multidisciplinary primary care teams** of health workers with broad-based skills, avoiding the pitfalls and cost-escalation of overreliance on tertiary care. This requires adopting a diverse and sustainable skills mix, harness the potential of community-based and mid-level practitioners in extending service provision to poor and marginalized populations. *(30, 31)* In many settings developing a national policy on and integrate, where they exist, community-based health practitioners in the health system, can enable these cadres to benefit from adequate system support and operate more effectively within integrated primary care teams. *(32, 33)* Support from national and international partners targeting an expansion of these cadres should be harmonized and aligned to national policies and systems. *(34)*

24. **Optimize health workforce performance through a fair and formalized employment package , within an enabling working environment.** This includes providing health workers with clear roles and expectations, guidelines, adequate processes of work, opportunities to correct competency gaps, supportive feedback, and a suitable work environment and incentives; but also – and crucially – a fair wage appropriate to their skills and contributions, with timely and regular payment as a basic principle, meritocratic reward systems and opportunities for career advancement.

Fragile states and countries in chronic emergencies

25. **In addition to the policy options above, in contexts characterized by fragility, insecurity and political instability there is a specific additional need to guarantee protection of health workers from violence and harm**, as part of a broader agenda of positive practice environments guaranteeing occupational health and safety in the workplace.

Responsibilities of WHO Secretariat

26. **Develop normative guidance, support operations research to identify evidence-based policy options, and provide technical cooperation** – as may be relevant to the needs of Member States – on health workforce education, scope of practice of different cadres, evidence-based deployment and retention strategies, quality control and performance enhancement approaches, including regulation.

Recommendations to other stakeholders and international partners

27. **Education institutions to adapt institutional set-up and modalities of instruction to respond to transformative education needs.** Reflecting the growth in private education establishments, it is critical to attain harmonization of quality standards across public and private training institutes.

28. **Professional councils, other regulatory authorities, or – where relevant to the national institutional context – relevant departments of line ministries, to adopt "right touch" regulation** that is transparent, accountable, proportionate, consistent and targeted. These bodies play a central role in ensuring that professionals are competent, sufficiently experienced and adhere to agreed standards of ethical practice *(35)*; countries should be supported in establishing them or strengthening them if needed. Professional councils or associations to create appropriate mechanisms to separate their role as guarantor of the quality of practice from that of representing the interests of their members. *(36)* Regulators should keep a register of the competent and practising, rather than those that have simply completed a programme; oversee accreditation of pre-service education programmes; implement mechanisms to assure continuing competence; operate fair and transparent processes that support practitioner mobility and simultaneously protect the public; and facilitate a range of conduct and competence approaches that are proportionate to risk and efficient and effective to operate. *(37)* Professional councils and associations should collaborate towards appropriate task sharing models and inter-professional collaboration, and ensure that cadres other than dentists, midwives, nurses, pharmacists and physicians also benefit in a systematic manner from accreditation and regulation processes.

Objective 2

To align HRH investment decisions at national and global levels to current and future needs of the health systems and the demand of the health labour market, maximizing opportunities for employment creation and economic growth

TARGET 2.1.
All countries: by 2030, 80% of countries allocate at least X% of their GDP to health worker production, recruitment, deployment and retention, within a balanced allocation taking into account other health and social development priorities.

TARGET 2.2.
High and middle-income countries: by 2030, all countries meet at least 90% of their health personnel needs with their own human resources for health, and do so in conformity with provisions of the WHO Global Code of Practice on International Recruitment of Health Personnel.

TARGET 2.3.
Low-and middle-income countries: by 2030, to create and fill at least 10 million additional jobs in the health and social care sectors to address unmet needs for the equitable and effective coverage of health services.

TARGET 2.4.
High-income countries: to ensure that by 2030 all OECD countries can demonstrate allocating at least 25% of all development assistance for health to HRH.

29. **The demand for and the size of the global health workforce are forecasted to grow substantially in the next decades as a consequence of population and economic growth, combined with demographic and epidemiologic transitions.** There are however substantial mismatches in the needs of, demand for and supply of health workers nationally, sub-nationally and globally, leading to inequitable distribution and deployment of health workers. Efforts to scale up essential interventions to achieve the health-related targets of the Sustainable Development Goals and universal health coverage might be compromised by massive shortage of health workers in low- and middle-income countries. In parallel, 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. *(38)*

30. **Public sector intervention to correct for the insufficient provision of health workers, their inequitable deployment or their inadequate motivation and performance is needed.** Implementing an HRH agenda conducive to the attainment of the health goals in the post-2015 period will require greater availability of resources, as well as more efficient use of existing ones. Domestic spending on HRH averages 33.6% of total government expenditure on health in countries with available data; *(39)* in many low- and middle-income countries greater efforts at mobilization of domestic resources are both necessary and possible, and should be supported by appropriate macro-economic policies at both national and global levels. 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. *(40)* But several low-income countries and

fragile States will still require overseas development assistance for a few more decades to ensure an adequate fiscal space for the necessary HRH investments; in this context, a high-level policy dialogue at global level is warranted to explore how to make international mechanisms for development assistance for health fit-for-purpose and allow them to provide sustained investment in both capital and recurrent costs for HRH.

31. **New evidence is starting to emerge on the broader socioeconomic impacts of health workforce investments.** Health care employment has a significant growth-inducing effect on other sectors: *(41)* this, 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 the gender-neutral opportunities in health workforce education and employment and the increasing role of women in the health workforce.

Policy options for WHO Member States

All countries

32. **Build forecasting and planning capacity to develop or improve HRH policy and strategies that quantify health workforce needs, demands and supply** under different possible future scenarios, in order to manage health workforce labour markets and devise effective and efficient policies that respond to today's needs while anticipating tomorrow's expectations (Figure 2). HRH plans should be costed, financed, implemented and continually refined so as to address (a) estimation of number and category of health workers required to meet public health goals and population health needs; (b) capacity to produce sufficient qualified workers (education policies); and (c) labour market capacity to recruit, deploy and retain health workers (economic and fiscal capacity, workforce deployment, remuneration and retention through financial and non-financial strategies).

Figure 2. Policy levers to shape health labour markets
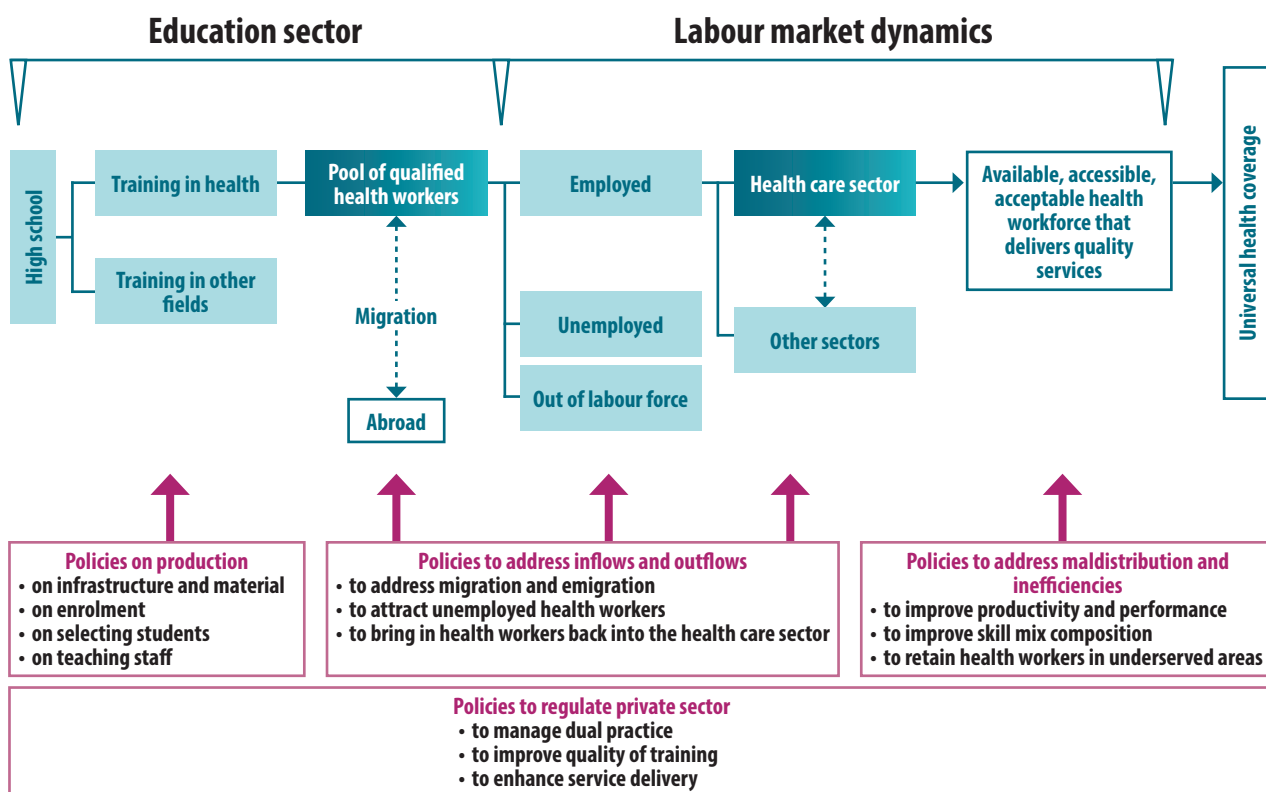
Source: Sousa et al, 2013, Bulletin of the WHO.

33. **Catalyse multi-sectoral action on health workforce** issues to generate required support from ministries of finance and labour (or equivalent), and to ensure alignment of different sectors and constituencies and stakeholders in society to the national health workforce strategies and plans, harnessing its benefits on job creation, economic growth and gender empowerment.

34. **Invest strategically through long-term (10–15 years) public policy stewardship and strategies in decent conditions of employment** that respect the rights of workers, *(42)* a safe work environment and better working environments, including at the very least the provision of a living wage, and incentives for equitable deployment and retention .

High-income countries

35. **Invest in the production, recruitment, deployment and retention of health workers to meet national and sub-national needs through domestically trained health workers.** Improve educational investment strategies to match current and anticipated demand of the health labour market; prevent newly qualified students being unable to enter the employment market, particularly during times of recession, and eventually being lost to health care. *(43)*

36. **Consider opportunities for re-skilling workers from declining sectors and industries of the economy** (e.g. manufacturing, agriculture, depending on the country) to be redeployed into the health and social care sectors *(44)*, particularly in jobs and roles where the duration of training is short, and entry barrier is relatively low.

Low- and middle-income countries

37. **Low- and middle income countries to increase investments to boost market-based demand and supply of health workforce, and align them more closely with population health needs**, including through appropriate strategies to retain health workers in the country, consistently with the principles of the WHO Global Code of Practice on International Recruitment of Health Personnel. In many upper middle-income countries this will entail increasing the supply capacity of health workers, to cope with rising domestic demand fuelled by economic growth and contain cost escalation. *(45)*

38. **Low-income countries to mobilize resources for HRH investment 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. *(46)* Such investments should be consistent with and aligned to the broader health and social protection agenda. *(47)*

Fragile states and countries in chronic emergencies

39. In addition to the policy options above, in contexts characterized by fragility, insecurity and political instability there is a specific additional need to **develop national capacity to absorb and effectively utilize both domestic and international resources**. Especially in these settings, support by development partners on HRH should be predictable and long-term.

Responsibilities of WHO Secretariat

40. **Provide normative guidance and technical cooperation – as may be relevant to the needs of Member States – on health workforce planning and forecasting, health labour market analysis, costing of national HRH strategies, and tracking of national and international financing for HRH.** Recognizing the continued need for external assistance in some low-income and fragile countries, WHO should also advocate with global and regional financial institutions, development partners and global health initiatives for adoption of macro-economic and funding policies conducive to greater and more strategically targeted investments in HRH.

Recommendations to other stakeholders and international partners

41. **The International Monetary Fund, the World Bank, regional development banks and others should recognize investment in the health workforce as a productive sector, with the potential to create 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.

42. **Global Health Initiatives to establish governance mechanisms to ensure all grants and loans include an assessment of the health workforce implications**, and a deliberate strategy on how specific programming will contribute to HRH capacity-building efforts at institutional, organizational and individual levels. The recruitment of general service staff by disease-specific programmes weakens health systems, and should be avoided through integration of disease-specific programmes into PHC strategies.

43. **Development partners to coordinate their investments for HRH, and align it to long-term national needs as expressed in national sector plans.** Global health initiatives should realign their health workforce support to strengthen sustainably HRH, including the possibility for investment in both capital and recurrent expenditure for general HRH, overcoming the current preferential focus on short-term disease-specific in-service training. *(48, 49)* Related to that, development partners should consider the establishment of a multilateral funding facility to support international investment in health systems. *(50)*

44. **The OECD should establish mechanisms to enable tracking the proportion of development assistance for health which is allocated to HRH**, as current processes and data requirements for tracking international aid flows to health don't allow capturing reliably and consistently health workforce investments *(51)*.

Objective 3

To build the capacity of national and international institutions for an effective leadership and governance of HRH actions

TARGET 3.1.
By 2030, 80% of all countries have institutional mechanisms in place to effectively steer and coordinate an inter-sectoral health workforce agenda.

45. **Effective governance and strengthening of institutional capacities are required for the implementation of a comprehensive health workforce agenda in countries.** Despite considerable advances in the last decades, progress in the HRH area has not been fast enough, nor deep enough. 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; but it is also a political one, requiring the will and the power to coordinate efforts by different sectors and constituencies in society, and different levels of government. *(52)* The key challenge is not lack of evidence on effective interventions: it is how to simultaneously ensure effective intersectoral governance, strengthen technical capacity and mobilize financial resources for the contemporary HRH agenda. *(53)* This requires the political will – and accountability of – heads of government.

46. **Technical and management capacities are needed to translate political will and decisions into effective implementation.** 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, norms and guidelines once these are developed. *(54)*

47. **A fit for purpose global health governance can support the implementation of national HRH agendas.** 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 and evidence, the provision or mobilization of technical and financial assistance, the ethical management of health labour mobility, the assessment of HRH implications of global health goals and resolutions, are transnational, and require a global approach underpinned by a commitment to international solidarity. A global mechanism for HRH governance is needed for high-level political engagement, inter-sectoral and multi-lateral policy dialogue, and to foster global coordination and mutual accountability, effectively linked with United Nations system processes for monitoring of universal health coverage and the Sustainable Development Goals.

Policy options for WHO Member States

All countries

48. **Establish the national business case for HRH as a vital component of UHC, use it for demanding plans and budgets to mobilize adequate resources, and support it by necessary regulations and mechanisms for policy coordination and oversight.** The effective implementation of a national workforce agenda requires marshalling support from ministries of finance, education, labour, civil service commissions, local government and the private sector. The coordination among these actors can be enabled by establishing national mechanisms for coordinated HRH governance and policy dialogue among different sectors and constituencies; *(55)* these should accommodate in the political decision making process the

legitimate involvement and interests of a range of stakeholders, including civil society, citizens, health workers, health professionals and their unions or associations, regulatory bodies, employers' associations, insurance funds, so as to broaden political ownership and institutional sustainability of HRH policies and strategies, while not losing sight of public policy objectives.

49. **Strengthen technical and management capacity for effective development and implementation of HRH policies, norms and guidelines.** This will accelerate the adoption of innovative processes, technologies, service organization and training delivery modalities for effective use of resources.

50. **Ensure that the public health workforce links health workforce development efforts with the social services workforce** and the wider social determinants of health, including access to housing, food, education and the local environment conditions.

High-income countries

51. **Develop capacity to align incentives for health workforce education and health care provision to public health goals.** This entails creating institutional mechanisms to balance the growing needs related to an ageing population and new and ever more expensive health technologies with a realistic forecast of the available resource envelope.

Low- and middle-income countries

52. **Ensure that all countries have an effective HRH unit or department** reporting to Ministers, with capacity for: advocating HRH development; mobilizing and using effectively and accountably resources; 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; effectively tracking international mobility of health workers, and manage migratory flows to maximize benefits for source countries; and monitoring and evaluating HRH interventions.

53. **Strengthen the institutional environment for health workforce production deployment, retention and performance management.** This entails building up the human and institutional capacities required for the design, development and delivery of pre-service and in-service education of health workers; development of health professional associations; the design of effective performance management and reward systems; the collaboration with and regulation of private sector educational institutions and health providers. In decentralized contexts, this capacity needs to be available at the relevant administrative level.

Fragile states and countries in chronic emergencies

54. In addition to the policy options above, in contexts characterized by fragility, insecurity and political instability, in cases where the central system of governance is weak there may be a need to adopt **flexible approaches to HRH development that are tailored to the specific reality of the country, such as targeting health workforce interventions at a decentralized level or through non-State actors**.

55. **Exploit the window of opportunity – when availability of donor funding and opportunity for reform is greatest – to make rapid progress towards stronger institutions.** *(56)* This may require establishing early in the recovery process a register of the practicing workforce linked to the payroll, excising, where applicable, ghost workers. *(57)*

Responsibilities of WHO Secretariat

56. **Provide Member States with technical cooperation and capacity building to develop core competencies in HRH policy, planning, resource mobilization, forecasting and management.** Capacity building efforts may also be aided by facilitating the development of an internationally recognized, postgraduate professional programme on HRH policy and planning, with an international mentoring and professional network to support the implementation of workforce science.

57. **Strengthen global capacity to implement the trans-national HRH agenda by fostering effective coordination, alignment and accountability** through facilitation of a network of international HRH stakeholders and actors.

Recommendations to other stakeholders and international partners

58. **Parliaments and civil society to contribute to sustained momentum of HRH agenda through accountability** mechanisms of both public and private sector education institutions and employers.

59. **The international community, development partners, and global health initiatives to systematically examine the health workforce implications of any health goals that are considered and adopted.** As part of this, the WHO Secretariat should also cooperate with its Governing Bodies mechanisms to create the conditions 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. *(58)*

Objective 4

To ensure that reliable and up-to-date HRH data, evidence and knowledge underpin monitoring and accountability of HRH efforts at national and global levels

TARGET 4.1.
By 2030, 90% of countries have established mechanisms for HRH data sharing through national health workforce accounts, and on a yearly basis report core HRH indicators to WHO Secretariat and publish them.

60. **Better HRH data and evidence are required as a critical enabler for enhanced planning, policy making, governance and accountability at national and global levels.** The evidence-to-policy feedback loop is an essential feature of resilient health systems, defined as those with the capacity to learn from experience and adapt according to changing needs. Forecasting of workforce requirements, informed by reliable and updated health workforce information, labour market analyses, and scanning of future scenarios, can inform the development, implementation, monitoring, impact assessment and continuous updating of workforce strategies. This field presents the potential for major improvements in the coming decades, with opportunities stemming from technological innovation, connectedness, the Internet and the beginning of a "big data" era, characterized by a dramatic growth in the types and quantity of data collected by systems, patients and health workers.

61. **The post-2015 development objectives require aligning the public policy agenda on governance, accountability and equity with strategic intelligence on the national and global health labour market.** 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 health targets in the sustainable development goals and universal health coverage. Improvements in HRH information architecture and interoperability can generate core indicators in support of these processes. Data collected 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 and quality of care); absence and absenteeism and their root causes; and labour dynamics of mobility (rural vs urban, public vs private, international mobility). *(59)*

62. **This strategy includes an accountability framework to assess progress on its recommendations.** At the country level, the policy options identified as most relevant to individual Member States should be embedded in national health and development strategies and plans. Specific HRH targets and indicators should be included in national policies, strategies and development frameworks, and multi-sectoral and multi-constituency mechanisms strengthened to reflect the key HRH interventions and accountability points from inputs to impact. 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. Global accountability will include a progressive agenda to implement national health workforce accounts with annual reporting by countries on core HRH indicators and against the targets identified under the four objectives in this strategy. Reporting requirements for Member States will be streamlined by this progressive improvement in HRH data, effectively linking monitoring of the strategy with that of the WHO Global Code of Practice on International Recruitment of Health Personnel and other relevant HRH-focused WHA resolutions and strategic documents and resolutions adopted at regional level. Global monitoring will also be linked and synchronized with the accountability framework of the emerging sustainable development goals.

Policy options for WHO Member States

All countries

63. **Invest in 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 to establish and implement national health workforce accounts.** *(60)* These should progressively extend the Minimum Data Set to a comprehensive set of key performance indicators on health workers' stock, distribution, flows, demand, supply capacity and remuneration, in both the public and private sector, as a precondition for the understanding of health labour markets and the design of effective policy solutions. National or regional workforce observatories can represent a useful implementation mechanism for this agenda. Opportunities for greater efficiency can be exploited by harnessing technological advances, connectedness and the Internet, as well as the rise of new approaches for health workforce futures, in the design of systems for HRH data collection, gathering and utilization. *(61)*

64. **Put in place incentives and policies for the collection, reporting and analysis of workforce data to inform transparency and accountability, and public access for different levels of decision-making.** In particular, countries should facilitate national and subnational collection and reporting of health workforce data through standardized, annual reporting to the WHO Global Health Observatory. All workforce data (respecting personal confidentiality) should be treated as a global public good to be shared in the public domain for the benefit of different branches of government, health care professional associations and development partners.

65. **Embed in national health or HRH strategies the relevant policy options included in this strategy, and the corresponding monitoring and accountability requirements.** Accountability for HRH at the national level should be accompanied by mechanisms for accountability of HRH at the grassroots, harnessing the voice and capacity of communities and service users to generate feed-back loops to improve quality of care and patient safety. Similarly, at the global level countries should request the United Nations Secretary-General's office to ensure the Sustainable Development Goals accountability framework includes health workforce targets or indicators.

High-income countries

66. **Apply big data approaches to gain a better understand of the health workforce**, including its size, characteristics and performance to generate insights into the gaps and possibilities for health workforce strengthening.

Low- and middle-income countries

67. **Strengthen HRH information systems and build the human capital required to operate them** in alignment with broader health management information systems, at all levels, as well as the capacity to use data effectively for dialogue with policy-makers.

68. **Exploit leapfrogging opportunities through the adoption of ICT solutions** for HRH data collation and storage, avoiding the capital-heavy infrastructure needed in the past.

Fragile states and countries in chronic emergencies

69. In addition to the policy options above, in contexts characterized by fragility, insecurity and political instability there is a specific additional need to **professionalize the development of HRH information systems through targeted capacity-building initiatives** and the establishment or strengthening of relevant institutions at national level. *(62)*

Responsibilities of WHO Secretariat

70. **Develop, review the utility of and update and maintain tools, guidelines and databases relating to HRH data and evidence.**

71. **Facilitate the progressive implementation of national health workforce accounts** and a digital reporting system for countries to report on a yearly basis on a minimum set of core HRH indicators, including information on health workforce production, recruitment, availability, composition, distribution, costing and migratory flows. *(63)*

72. **Streamline reporting requirements for Member States**, integrating in the annual reporting on HRH on the monitoring of the implementation of the WHO Global Code of Practice on the International Recruitment of Health Personnel, other HRH-focused WHA resolutions, and progress in implementation of the Global Strategy on HRH. Adapt, integrate and link the monitoring of targets in the Global Strategy on HRH to the emerging accountability framework of the Sustainable Development Goals.

Recommendations to other stakeholders and international partners

73. **The International Labour Office to revise the International Standard Classification of Occupations (ISCO)**, for greater clarity on classification and delineation of health workers and health professions, *(64)* moving towards definitions that reflect worker competences together with the tasks they perform.

74. **Research and academic institutions to leverage strengthened HRH data and measurement for impact evaluations and research on cost-effectiveness** and return on investment of health workforce interventions. *(65)*

Annex 1
Costed health workforce requirements for implementation of Global Strategy on HRH

Annex 1 will be available in July 2015, once the analysis is finalised.

Annex 2

Annotated list of key tools and guidelines for HRH assessment, planning, forecasting, education, management, deployment

Annex 2 will be compiled by July 2015 and will incorporate an overview of evidence-based guidelines and recommendations.

References

1. GHWA-WHO 2015. Health Workforce 2030 – Towards a global strategy on human resources for health (http://www.who.int/hrh/documents/synthesis_paper_them2015/en/, accessed 5 June 2015)

2. Campbell J, Dussault G, Buchan J, Pozo-Martin F, Guerra Arias M, Leone C, et al. A universal truth: no health without a workforce. Forum report, third Global Forum on Human Resources for Health, Recife, Brazil. Geneva: Global Health Workforce Alliance and World Health Organization; 2013 (http://www.who.int/workforcealliance/knowledge/resources/hrhreport2013/en/, accessed 13 February 2015)

3. International Health Regulations (2005). Geneva: World Health Organization; 2008 (http://www.who.int/ihr/publications/9789241596664/en/, accessed 13 February 2015).

4. The world health report 2007 – a safer future: global public health security in the 21st century. Geneva: World Health Organization; 2007 (http://www.who.int/whr/2007/en/, accessed 13 February 2015).

5. Campbell J, Buchan J, Cometto G, David B, Dussault G, Fogstad H, et al. Human resources for health and universal health coverage: fostering equity and effective coverage. Bulletin of the World Health Organization. 2013;91(11):853–63.

6. Van Lerberghe W, Matthews Z, Achadi E, et al. Country experience with strengthening of health systems and deployment of midwives in countries with high maternal mortality. Lancet. 2014;384(9949):1215–25.

7. Campbell J, Dussault G, Buchan J, Pozo-Martin F, Guerra Arias M, Leone C, et al. A universal truth: no health without a workforce. Forum report, third Global Forum on Human Resources for Health, Recife, Brazil. Geneva: Global Health Workforce Alliance and World Health Organization; 2013 (http://www.who.int/workforcealliance/knowledge/resources/hrhreport2013/en/, accessed 13 February 2015)

8. De Luca MA, Soucat A. Transforming the global health workforce. New York: New York University; 2013.

9. Cometto G, Boerma T, Campbell J, et al. The third Global Forum: framing the health workforce agenda for universal health coverage. Lancet Global Health. 2013;(6):e324–5.

10. The road to dignity by 2030: ending poverty, transforming all lives and protecting the planet. Synthesis report of the Secretary-General on the post-2015 agenda. New York: United Nations; 2014 (http://www.un.org/disabilities/documents/reports/SG_Synthesis_Report_Road_to_Dignity_by_2030.pdf, accessed 13 February 2015).

11. World Health Organization 2014. WHA 67.24 - Follow-up of the Recife Political Declaration on Human Resources for Health: renewed commitments towards universal health coverage. (http://apps.who.int/gb/ebwha/pdf_files/WHA67/A67_R24-en.pdf?ua=1, accessed 5 June 2015)

12. Hernandez P, Poullier J, Van Mosseveld C, et al. Health worker remuneration in WHO Member States. Bulletin of the World Health Organization. 2013;91(11):808–15.

13. Global, regional, and national age-sex specific all-cause and cause-specific mortality for 240 causes of death, 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013. GBD 2013 Mortality and Causes of Death Collaborators. Lancet. 2014. doi: http://dx.doi.org/10.1016/S0140-6736(14)61682-2

14. WHO 2015. WHO Global Strategy on People-Centred and Integrated Health Services. – Interim report. Geneva: World Health Organization (http://www.who.int/servicedeliverysafety/areas/people-centred-care/en/ accessed 5 June 2015)

15. Economic, demographic, and epidemiological transitions and the future of health labour markets. Global Health Workforce Alliance, Working Group 1, 2014 (http://www.who.int/workforcealliance/media/news/2014/WG1_SynthesisSept282014.pdf?ua=1, accessed 14 February 2015)

16. WHO Global Code of Practice on the International Recruitment of Health Personnel. WHA63.16. Geneva: World Health Organization; 2010 (http://apps.who.int/gb/ebwha/pdf_files/WHA63/A63_R16-en.pdf, accessed 13 February 2015)

17. United Nations 2015. Global!Strategy for Women's, Children's and Adolescents' Health-Zero draft for consultation http://www.who.int/life-course/partners/global-strategy/global-strategy_zero-draft.pdf Accessed 5 June 2015

18. WHO 2015. WHO Global Strategy on People-Centred and Integrated Health Services. – Interim report. Geneva: World Health Organization. http://www.who.int/servicedeliverysafety/areas/people-centred-care/en/ accessed 5 June 2015

19. Every newborn: an action plan to end preventable deaths. Geneva: World Health Organization and United Nations Children's Fund; 2014 (http://apps.who.int/iris/bitstream/10665/127938/1/9789241507448_eng.pdf, accessed 14 February 2015).

20. Family Planning 2020 (http://www.familyplanning2020.org/, accessed 14 February 2015).

21. 90-90-90: an ambitious treatment target to help end the AIDS epidemic. Joint United Nations Programme on HIV/AIDS (UNAIDS); 2014 (http://www.unaids.org/sites/default/files/media_asset/90-90-90_en_0.pdf, accessed 14 February 2015).

22. UNAIDS 2015. UNAIDS 2016-2021 Strategy – draft- http://www.unaids.org/en/resources/campaigns/20150301_strategy_consultation/timeline accessed 5 June 2015

23. Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020. Geneva: World Health Organization; 2013 (http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236_eng.pdf?ua=1, accessed 14 February 2015).

24. The world health report 2010 – health system financing: the path to universal health coverage. Geneva: World Health Organization; 2010 (http://www.who.int/whr/2010/en/, accessed 15 February 2015).

25. Dominican Republic's health sector reinvests savings from ghost workers to improve care. Intrahealth International; 2010 (http://www.intrahealth.org/page/dominican-republics-health-sector-reinvests-savings-from-ghost-workers-to-improve-care, accessed 15 February 2015).

26. Frenk J, Chen L, Bhutta ZA, et al. Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. Lancet. 2010; 376(9756):1923–58.

27. Buchan J, Couper ID, Tangcharoensathien V, et al. Early implementation of WHO recommendations for the retention of health workers in remote and rural areas. Bulletin of the World Health Organization. 2013;91(11):834–40.

28. Information technology (IT) in the new global strategy on human resources for health. Input to GHWA public consultation process from participants at the GETHealth Summit, Dublin Castle, Ireland, 14 November 2014 (http://www.who.int/workforcealliance/media/news/2014/4HSE_GlobalHealthProgrammeIreland.pdf?ua=1, accessed 15 February 2015).

29. Bollinger R, Chang L, Jafari R, et al. Leveraging information technology to bridge the health workforce gap. Bulletin of the World Health Organization. 2013;91(11):890–2.

30. Lewin S, Munabi-Babigumira S, Glenton C, et al. Lay health workers in primary and community health care for maternal and child health and the management of infectious diseases. Cochrane Database of Systematic Reviews. 2010;3.

31. Lassi Z, Cometto G, Huicho L, et al. Quality of care provided by mid-level health workers: systematic review and meta-analysis. Bulletin of the World Health Organization. 2013;91(11):824–33I.

32. McCord GC, Liu A, Singh P. Deployment of community health workers across rural sub-Saharan Africa: financial considerations and operational assumptions. Bulletin of the World Health Organization. 2013;91:244–53B

33. Tulenko K et al. Community health workers for universal health-care coverage: from fragmentation to synergy Bulletin of the World Health Organization 2013;91:847-852

34. GHWA and WHO, 2013. Mogedal S, Wynd S, Afzal M. A framework for partners' harmonised support Community Health Workers and Universal Health Coverage. http://www.who.int/workforcealliance/knowledge/resources/frame_partner_support/en/ Accessed 5 June 2015

35. xxx

36. Campbell J, Dussault G, Buchan J, Pozo-Martin F, Guerra Arias M, Leone C, et al. A universal truth: no health without a workforce. Forum report, third Global Forum on Human Resources for Health, Recife, Brazil. Geneva: Global Health Workforce Alliance and World Health Organization; 2013 (http://www.who.int/workforcealliance/knowledge/resources/hrhreport2013/en/, accessed 13 February 2015)

37. Improving health worker performance. Published for the U.S. Agency for International Development by the Quality Assurance Project. Bethesda, MD: University Research Co., LLC; 2014 (https://www.usaidassist.org/sites/assist/files/improving_health_worker_performance_feb2014.pdf, accessed 15 February 2015).

38. Tankwanchi A, Ozden C, Vermund S. Physician emigration from sub-Saharan Africa to the United States: analysis of the 2011 AMA Physician Masterfile. PLoS Medicine. 10(12). doi: 10.1371/journal.pmed.1001513

39. Hernandez P, Poullier J, Van Mosseveld C, et al. Health worker remuneration in WHO Member States. Bulletin of the World Health Organization. 2013;91(11):808–15

40. ILO comments on draft papers of TWGs 1, 3, 7 & 8. Submission to the public consultation process on the global strategy on human resources for health. Geneva: International Labour Office; 2014 (http://www.who.int/workforcealliance/media/news/2014/GHWA-consultation_ILO-comments.pdf?ua=1, accessed 14 February 2015)

41. Arcand, JL, Araujo EC, Menkulasic G, Weber M. Health sector employment, health care expenditure and economic growth: what are the associations? Washington (DC): World Bank; forthcoming.

42. ILO, 1978. C151: Labour Relations (Public Service) Convention, 1978 (No. 151). Convention Concerning Protection of the Right to Organise and Procedures for Determining Conditions of Employment in the Public Service. Geneva: International Labour Office; 1978 (http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_INSTRUMENT_ID:312296, accessed 14 February 2015).

43. Economic, demographic, and epidemiological transitions and the future of health labour markets. Global Health Workforce Alliance, Working Group 1, 2014 (http://www.who.int/workforcealliance/media/news/2014/WG1_SynthesisSept282014.pdf?ua=1, accessed 14 February 2015).

44. Prissades et al.

45. Economic, demographic, and epidemiological transitions and the future of health labour markets. Global Health Workforce Alliance, Working Group 1, 2014 (http://www.who.int/workforcealliance/media/news/2014/WG1_SynthesisSept282014.pdf?ua=1, accessed 14 February 2015).

46. Leadership and governance for enhanced HRH contributions to health systems strengthening: insights, imperatives, investments. Technical Working Group 5 for the global strategy on human resources for health; 2014 (http://www.who.int/workforcealliance/media/news/2014/TWG5_LeadershipandGovernance.pdf?ua=1, accessed 14 February 2015).

47. The ILO Social Protection Floors Recommendation, 2012 (No. 202). Geneva: International Labour Office; 2012 (http://www.ilo.org/secsoc/areas-of-work/legal-advice/WCMS_205341/lang--en/index.htm, accessed 14 February 2015).

48. Vujicic M, Weber S, Nikolic I, et al. An analysis of GAVI, the Global Fund and World Bank support for human resources for health in developing countries. Health Policy and Planning. 2012;27(8):649–57.

49. Bowser D, Sparkes SP, Mitchell A, et al. Global Fund investments in human resources for health: innovation and missed opportunities for health systems strengthening. Health Policy and Planning. 2014;29(8):986–97.

50. Gostin L. Ebola: towards an international health systems fund. Lancet. 2014;384(9951):e49–51.

51. Campbell J, Jones I and Whyms D. More money for health, more health for the money: A health workforce perspective.

52. Sales M, Kieny MP, Krech R, Etienne C. Human resources for universal health coverage: from evidence to policy and action. Bulletin of the World Health Organization. 2013;91(11):798–798A.

53. Padilha A, Kasonde J, Mukti G, Crisp N, Takemi K, Buch E. Human resources for universal health coverage: leadership needed. Bulletin of the World Health Organization. 2013;91(11):800–800A.

54. Nurse J. What are the health workforce and service implications of the Global Framework for Public Health? Discussion paper, 2014 (http://www.who.int/workforcealliance/media/news/2014/RefA_PublicHealthpaper. pdf?ua=1, accessed 20 January 2015).

55. Kingue S, Rosskam E, Bela AC, Adjidja A, Codjia L. Strengthening human resources for health through multisectoral approaches and leadership: the case of Cameroon. Bulletin of the World Health Organization. 2013;91(11):864–7.

56. Pavignani E. Human resources for health through conflict and recovery: lessons from African countries. Disasters. 2011;35(4):661–79.

57. Re-energizing the HRH agenda for a post-2015 world: responding to the needs of fragile States. Technical Working Group 6 for the global strategy on human resources for health; 2014

58. Data and measurement of HRH availability, accessibility, acceptability, and quality. Technical Working Group 3 for the global strategy on human resources for health; 2014 (draft) (http://www.who.int/workforcealliance/ media/news/2014/TWG3_Paper_07Dec14.pdf?ua=1, accessed 14 February 2015).

59. Data and measurement of HRH availability, accessibility, acceptability, and quality. Technical Working Group 3 for the global strategy on human resources for health; 2014 (draft) (http://www.who.int/workforcealliance/ media/news/2014/TWG3_Paper_07Dec14.pdf?ua=1, accessed 14 February 2015).

60. WHO, 2015. Minimum Data Set for Health Workforce Registry - Human Resources for Health Information System. http://www.who.int/hrh/statistics/minimun_data_set/en/ accessed 5 June 2015

61. Horizon 2035: health and care workforce futures – progress update. Centre for Workforce Intelligence; 2014 (http://www.google.ch/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=1&ved=0CB8QFjAA&url= http%3A%2F%2Fwww.cfwi.org.uk%2Fpublications%2Fhorizon-2035-progress-update-july- 2014%2Fattachment.pdf&ei=I4q-VKHdL4WY7gaMqIGQBQ&usg=AFQjCNGMO_VTEr6ybQrh- k5oyQGdLdeNKQ&bvm=bv.83829542,d.ZGU, accessed 14 February 2015).

62. Re-energizing the HRH agenda for a post-2015 world: responding to the needs of fragile States. Technical Working Group 6 for the global strategy on human resources for health; 2014

63. Data and measurement of HRH availability, accessibility, acceptability, and quality. Technical Working Group 3 for the global strategy on human resources for health; 2014 (draft) (http://www.who.int/workforcealliance/ media/news/2014/TWG3_Paper_07Dec14.pdf?ua=1, accessed 14 February 2015).

64. Technical Working Group consultation papers 1 to 8: Submission to the public consultation process on the global strategy on HRH. International Confederation of Nurses; 2014 (http://www.who.int/workforcealliance/ media/news/2014/6ICN.pdf?ua=1, accessed 14 February 2015).

65. Foster AA. Recommendations for HRH global strategy papers: November 2014. Intrahealth International submission to the public consultation process on the global strategy on HRH, 2014 (http://www.who.int/ workforcealliance/media/news/2014/8IntraHealthInternational.pdf?ua=1, accessed 14 February 2015).