Building the **primary health care workforce** of the 21st century
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Key messages

1. The concept of a multidisciplinary primary health care workforce that was articulated in the Declaration of Alma-Ata is as valid and relevant today as it was 40 years ago. To progress towards universal health coverage, countries will need a health workforce that is aligned with population and community health needs and which is capable of adjusting to the growing demand for health care driven by rapid demographic, epidemiological, economic, social and political changes.

2. The primary health care workforce includes all occupations engaged in providing health promotion, disease prevention, treatment, rehabilitation and palliative care services, the public health workforce, and those engaged in addressing the social determinants of health. It also includes caregivers and volunteers, the majority of whom are women, who complement the work of salaried workers. Ensuring that all occupations play an effective role in the primary health care team, including through role optimization and role substitution, can transform traditional models of service provision.

3. A global overview of the primary health care workforce, its composition and distribution, is limited because of a lack of disaggregated national data (by occupation, sex, age, facility type and subnational administrative area). Addressing this gap will require concerted action by countries to report on Sustainable Development Goal (SDG) 3c through national health workforce accounts.

4. While lessons can be learned from the experience of others, each country needs to design its own solutions that meet its specific needs and that are realistic and feasible for its own context. A clear vision of the health system the country wants and of what role primary health care will play can inform the design of policies and strategies on health workforce development.

5. The Global Strategy on Human Resources for Health: Workforce 2030 and the report of the High-Level Commission on Health Employment and Economic Growth provide strategic orientation and policy options for strengthening the health and social workforce for primary health care, universal health coverage and the SDGs.

6. In the context of primary health care, socially accountable strategies, such as decentralizing education programmes and expanding rural health training, improve workforce availability and distribution, particularly in areas where care is most needed. Decentralized processes of recruitment, with adequate financial support, enable faster employment of staff in the public or private sector. Adapted and flexible packages of incentives, including decent work opportunities, can attract and retain health workers in areas with the most need. Policies to improve working conditions need to recognize the role played by informal caregivers and volunteers.

7. Adopting approaches based on multidisciplinary teams with a diverse skills mix and optimal scopes of practice increases workforce productivity while responding to a wide range of population and community needs. Strengthening regulation to formally recognize all occupations of health workers and allow them to practice to their full scope of competence is key for optimizing their performance.

8. Planning the primary health care workforce should be supported by valid data and knowledge, and should be for the workforce as a whole, not done by occupational groups or levels of care. Comprehensive plans and investments that appropriately factor in and prioritize the primary health care workforce are the best option. A multisectoral approach is needed to support the planning and the implementation of multifaceted strategies which are adapted to context, professional groups and national health objectives.

9. Continuing political commitment across changing governments and from one minister of health to another is the foundation of building a primary health care workforce that is responsive to population needs. Engaging all relevant stakeholders is a prerequisite to successful implementation of change.

10. Strategic investments in a country’s health system and in its workforce brings health benefits to the people, and also contributes to good employment, economic growth and a reduction in inequalities.
Introduction

The 1978 Declaration of Alma-Ata (Article VII.7) established that primary health care “relies, at local and referral levels, on health workers, including physicians, nurses, midwives, auxiliaries and community workers as applicable, as well as traditional practitioners as needed, suitably trained socially and technically to work as a health team and to respond to the expressed health needs of the community” (1). This premise is as relevant today as it was then for two main reasons:

1. The demand for health care is increasing. The increase is being driven by demographic, epidemiological, economic and technological changes, with changes also in population expectations and the diversity of actors (public and private) providing services. Primary health care services and their associated workforces will need to adapt to this rapidly changing reality while keeping at their core the vision and principles first elaborated in Alma-Ata 40 years ago.

2. The 2030 Agenda for Sustainable Development set an ambitious multisectoral and interconnected agenda for people, the planet and prosperity. Sustainable Development Goal (SDG) 3 on ensuring healthy lives and well-being for all ages recognizes universal health coverage as key to achieving all health targets. Primary health care is the means for achieving universal health coverage.

Recognizing these two central challenges, Member States of the World Health Organization (WHO) adopted the Global Strategy on Human Resources for Health: Workforce 2030 (2). Evidence from the report of the United Nations High Level Commission on Health Employment and Economic Growth showed that strategically spent financial resources to strengthen a country’s health system and its workforce is a sound investment that not only brings health benefits, but also contributes to inclusive economic growth by creating employment opportunities and decent jobs, particularly for women and youth (3). Women make up an average of 67% of health and social sector employment, compared with 41% of total employment (4). Investments in the primary health care workforce, in particular, can serve to magnify these gains.
Furthermore, the WHO Thirteenth General Programme of Work 2019–2023 again promotes primary health care services that are provided by “socially and technically competent and motivated multidisciplinary teams using strategies and techniques informed by the best evidence available“ (5).

This paper asks “What are the health workforce implications of and requirements for the implementation of the primary health care agenda in the 21st century?” It builds on evidence that informed the development of the global strategy on human resources and the Commission’s report. It describes the current state of the primary health care workforce based on four dimensions of workforce performance: availability, accessibility, acceptability and quality; presents a brief review of the driving forces of change and their effect on primary health care services and the workforce; and concludes with policy options to optimize the performance of the primary health care workforce and the actions required for their successful implementation. The above question is implicitly linked to the vision of primary health care for the 21st century namely:

Primary health care is a whole-of-society approach to maximize the level and distribution of health and well-being by acting simultaneously on three components: 1) primary care and essential public health functions as the core of integrated health services, 2) multisectoral policy and action, and 3) empowering people and communities. Primary health care has been shown to be the most equitable, effective, and cost-effective way to enhance the health of populations (World Health Organization. A vision for primary health care in the 21st century. 2018) 1.

1 WHO differentiates primary health care, a whole-of-society approach to health, from primary care, the first-contact with health services that are people centred, continuous, comprehensive and coordinated.
What is the primary health care workforce?

In 2006, the World Health Report 2006 defined the health workforce as “all people engaged in actions whose primary intent is to enhance health” (6). Applying the primary health care lens, our workforce of interest is all people engaged in the systems and services specific to primary health care. This includes all occupations engaged in the continuum of health promotion, disease prevention, treatment, rehabilitation and palliative care. It also includes the public health workforce, and those engaged in addressing the social determinants of health. Many of these occupations are engaged in the provision of diagnostics and treatment with referral to specialized services when needed. In many jurisdictions, these occupational groups perform a gatekeeper role to the health system. Increasingly, the Alma-Ata concept of a multidisciplinary team is being employed where role optimization and role substitution are transforming traditional models of service provision, e.g. services led by advanced practitioners with roles and responsibilities delegated as part of those teams.

In addition, the primary health care workforce includes caregivers and volunteers, the majority of whom are women. These individuals complement the work of salaried primary health care workers, notably assisting in daily life activities, monitoring medication, providing psychological support, or transport to health services. In the United Kingdom, for example, it is estimated that 1.7 million people do volunteer work in the health sector (7), and that 70% of additional workforce capacity required in 2035 may fall to unpaid caregivers and volunteers (8).
A study of volunteer caregivers in six African countries found that 81% of those were women (4). Unpaid caregivers and volunteers are therefore an important element of the workforce that policy-makers and planners need to consider. Beyond the provision of services, the primary health care workforce also draws upon a wider range of occupations responsible for the functioning of health systems, supporting strategic governance and converting policy into practice, such as: data collection, surveillance, management and maintenance. These also include epidemiologists, demographers, statisticians, policy analysts, managers, accountants, educators and researchers.

In practice, the configuration of the health workforce will vary between countries according to the organization of their health system and services and interventions for primary health care, and also their technical and financial capacities.

State of the primary health care workforce

Global estimates of the primary health care workforce are limited, primarily because of the lack of national disaggregated data that would provide an overview of its composition and distribution. Recognizing this as a barrier to progress, the World Health Assembly (WHA69.19), in 2016, mandated the progressive implementation of national health workforce accounts (9) to collect and report on national health workforce disaggregation by occupation, gender, age, facility type and subnational administrative area.

The following paragraphs briefly describe the current global situation of the health workforce based on four dimensions of their performance—availability, accessibility, acceptability and quality (Table 1). This gives an indication of the main problems affecting also the primary health care workforce.

Table 1 The health workforce we want: availability, accessibility, acceptability, quality

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Definition</th>
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<tr>
<td>Availability</td>
<td>The sufficient supply and appropriate stock of health workers, with the relevant competencies and skill mix that corresponds to the health needs of the population</td>
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<tr>
<td>Accessibility</td>
<td>The equitable distribution of health workers in terms of travel time and transport (spatial), opening hours and corresponding workforce attendance (temporal), the infrastructure’s attributes (physical, e.g. disabled-friendly buildings), referral mechanisms (organizational) and the direct and indirect cost of services, both formal and informal (financial)</td>
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<tr>
<td>Acceptability</td>
<td>The characteristics and ability of the workforce to treat all patients with dignity, create trust and enable or promote demand for services; this may take different forms such as a same-sex health worker or one who understands and speaks one’s language and whose behaviour is respectful according to age, religion, social and cultural values</td>
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<tr>
<td>Quality</td>
<td>The competencies, skills, knowledge and behaviour of the health worker as assessed according to professional norms (or other guiding standards) and as perceived by users</td>
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Source: Adapted from: A universal truth: no health without a workforce (10).
Availability

Shortages of qualified health workers have been reported since Alma-Ata. The 2006 World Health Report was first to offer global quantitative estimates of needs-based shortages. It identified 57 countries, out of 192, that reported having fewer than 23 physicians, nurses and midwives per 10 000 people, a threshold under which 80% of basic maternal and child health services could not be provided (6).

Using a threshold of 44.5 health workers per 10 000 people, corresponding to the number required to achieve a high coverage of services related to the health targets in the SDGs, it identified a shortage of about 17.4 million health workers in 2013 (2.6 million doctors, 9 million nurses, 5.8 million others), slowly declining to 14.5 million in 2030, under the current trends of production and employment (2). In absolute terms, the regions with the highest projected demand-based shortages in 2030 were East Asia and the Pacific (8.6 million) and South Asia (3.2 million), given the size of their populations. With regard to needs-based shortages, these were highest sub-Saharan Africa (2). Staffing gaps in relation to service delivery requirements were estimated – by a different methodology – to be possibly as high as 4 million health workers in high-income countries [member countries of the Organisation for Economic Co-operation and Development (OECD)], which would mean a projected global shortage of 18 million health workers, with the largest gaps in low- and middle-income countries (2).

High-income countries are not free of shortages, as is the case of most European Union countries, Gulf Cooperation Council countries, Australia, Canada and the United States of America, where it is estimated that 58 million people live in areas with shortages in primary health care staffing (11). In 2010, the European Commission estimated that in 2020 the unmet needs in primary health care workers would be 230 000 physicians, 150 000 dentists, pharmacists and physiotherapists, 590 000 nurses, and 1000 000 other health workers (12).

In high-income countries, demographic factors play an important role in explaining shortages. As the ageing of the population increases the demand for health services, the health workforce itself is ageing, and retirement rates are high and replacement rates are low. In these countries, shortages have in part been mitigated by the recruitment of trained foreign health workers, although the extent to which primary health care services have been targeted is unknown.

In lower-income countries, causes of shortages include insufficient capacity to produce more health workers (lack of educators, infrastructure and equipment, and clinical training sites), which is particularly acute in countries with a small population. The health labour market does not always absorb all available workers, leading to the paradox of unemployment coexisting with unmet needs. This is the case where there are not enough funded posts in the public sector and the work opportunities in the private sector are limited. Migration of health workers within and across regions is also increasing (13).
There are imbalances in the composition of the health workforce. The mix of physicians and nurses and of other occupational groups varies, which indicates different degrees of efficiency in the provision of services. For example, in 2015 the average ratio of nurses to doctors in OECD countries was 2.8; it was 4.6 in Finland and 1.1 in Turkey (14). In Asia and the Pacific, the ratio was 9.7 in Papua New Guinea, because of the very small number of doctors, and less than 1 in Pakistan, Viet Nam and Bangladesh (15). In many countries, the number of primary health care doctors and nurses is very low compared with hospital-based specialists. In 2015, in OECD countries, 70% of doctors were specialists, ranging from 95% in Greece to 41% in Ireland (14). Some occupations are less available than needed, in the areas of eye care (16), mental health (17), public health or rehabilitation (18), which are important in primary health care.

Many countries have created new occupations to increase the total availability of skilled health workers. Another strategy has been the recruitment of community health workers. The overall picture, at global, regional, national and sub-national levels, shows that the current supply of health workers does not meet needs and demands, and this is particularly acute in primary care and public health services.

**Accessibility**

Imbalances in access to health workers are a problem in almost every country of the world. The most obvious are geographical imbalances; populations living in rural, remote, low-density, isolated and hard to reach regions (e.g. small islands in Indonesia, the Philippines and Greece) or in poor urban areas and slums have less access to health workers.

Other important factors that limit accessibility to health workers include absenteeism, lack of or inhospitable infrastructures, unwelcoming staff and out-of-pocket expenditures on direct (e.g. user fees and informal payments) and indirect (e.g. transport, loss of opportunity and absence from work) costs. There is also evidence that some ethnic minorities tend to have less access (19).
Acceptability and quality

Acceptability and quality are two other critical dimensions of the performance of the health workforce. There is a fundamental mismatch across countries between health worker competencies and population needs. The Lancet Commission on the Education of Health Professionals for the 21st Century observed that “In most countries, the social competencies of graduates might not be aligned with the social, linguistic, and ethnic diversity of patients and populations” (20). Economic incentives prioritize narrow specializations and the development of professional occupations that are focused on curative services rather than orientation towards primary health care. Reorienting the education of health workers towards greater social accountability and reforming it through institutional (governance, structure and financing) and instructional (admission criteria, competencies, curricula and learning strategies) changes is imperative so that they acquire and maintain the knowledge, skills, attitudes and behaviours consistent with the changing needs and expectations of the population and with the principles of primary health care.

Traditional curricula do not always prepare health workers to work with new communication technologies and information systems. In addition, important skills such as cultural sensitivity, empathy, capacity to innovate, system thinking and, above all, capacity to work in multidisciplinary teams are not always developed. These competencies are required for all health workers to ensure that they are able to adapt their responses to populations with different cultural traits and values and to adapt to new patterns of delivery (e.g. remote contact, personalized care and self-care), and to increase their productivity. These core clinical competencies need to be continuously adjusted to the changing environment (21).

Many countries have recognized that there are competencies specific to primary health care and have created specialties in medicine, nursing and other professions accordingly. International professional organizations, such as the World Federation for Medical Education, the World Organization of Family Doctors, the International Council of Nurses, and the International Confederation of Midwives, provide guidelines on basic and life-long education in their respective professions. In the poor-resource context, continuing education is not available in a systematic manner. Accreditation is recognized as an important mechanism to maintain and improve the quality of education institutions and programmes. While accreditation is well implemented in some parts of the world such as Canada, the United States, the Caribbean, the United Kingdom, Australia, New Zealand and others, it is only just developing elsewhere (22). It is more common in medical than nursing and midwifery schools and in the public than private sector training.

The quality of health workers’ practice varies between countries and within countries. Quality assurance mechanisms tend to function better where professional councils proactively monitor the quality of practice, support life-long learning and exercise discipline (22). Licensing and certification are common and are kept for-life in many countries, without recertification requirements. Re-certification exists in a few countries; continuing education requirements are associated with renewing the right to practice. In spite of achievements, the global situation of the health workforce, and particularly the primary health care workforce, is far from ideal.
Forces of change and their impact on primary health care services and the workforce

The social and health environment is changing rapidly and primary health care and the primary health care workforce need to adapt. Changes are taking place in the structure and composition of the population, in the burden of disease, in behaviours of people and providers, in the economic and political environment, and in technological innovation and expansion of knowledge. These generate new workforce requirements in terms of numbers of workers, types of workers and competencies of workers, as shown in Table 2. These requirements are context-specific and national policy-makers and planners are constrained by what are affordable, acceptable and technically feasible.
Table 2 Driving forces of change and their impact on primary health care (PHC) services and requirements of the PHC workforce

<table>
<thead>
<tr>
<th>Forces of change</th>
<th>Impact on health services</th>
<th>Impact on workforce requirements</th>
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<tbody>
<tr>
<td><strong>Burden of disease, a)</strong></td>
<td>Demand for PHC changes and increases.</td>
<td>The total number of PHC workers has to increase to meet the additional demand.</td>
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<td></td>
<td>In countries which are experiencing a demographic and epidemiological transition, the burden of disease still includes a high proportion of infectious and communicable diseases</td>
<td>How much more and which type will depend on the context, the workers’ productivity and participation in the labour market.</td>
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<td></td>
<td></td>
<td>New competencies need to be acquired by future health workers and by the currently active ones to work in a new model of care that is people, family and community-centred away from the current prevalent model of care based in hospital and specialized care.</td>
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<td></td>
<td></td>
<td>Education institutions need to adapt their programmes. Continuing education will need to be strengthened.</td>
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<td><strong>Burden of disease, b)</strong></td>
<td>Services have to deal with more complex cases, requiring a holistic approach and long-term management.</td>
<td>Services are delivered by multiprofessional teams, with a skills mix that includes new occupations (e.g. coordinators, case managers) and new specialties (e.g. PHC geriatric specialized nurses, PHC psychologists). Teams are “fluid” and adapt as demand evolves, with some members belonging to more than one team (multiple team membership), with education programmes and remuneration adjusted to reflect this.</td>
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<td>Chronic diseases (both noncommunicable and communicable diseases) require long-term management and continuity of care over time, and better integration of care between primary and referral care, and across providers.</td>
<td>There is a move away from selective, disease-specific PHC programmes to comprehensive patient-centred care. Funding, including donor priorities and programmes, needs to reflect this shift, as does staff training.</td>
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<td>Greater emphasis is placed on patient-led care and patients as partners. New roles for support and new technology to assist with this will be needed.</td>
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<td><strong>Demographic changes</strong></td>
<td>An older population tends to require more health services.</td>
<td>More health workers are needed for service provision for older users, including care closer to home/supported living settings. Multidisciplinary teams become more important working with expanded roles for health and social care.</td>
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<td>Immigration creates the need to respond to new clientele with different language, values, social norms, and perceptions of health and illness.</td>
<td>Training is needed to prepare health workers to identify and respond to the specific needs of migrants.</td>
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<td>As replacement of retiring workers becomes difficult, the need for services to find new ways to provide care (e.g. use of technology and informal carers) increases.</td>
<td>Strategies to attract and retain young people to health professional roles are needed.</td>
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<tr>
<td>Forces of change</td>
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<td><strong>Technology/science innovations</strong>&lt;br&gt;• Telemedicine, electronic patient records, ehealth, mhealth, big data, artificial intelligence, information systems, drugs, precision medicine&lt;br&gt;• Growth of the knowledge base</td>
<td>e-health and m-health have the capacity to improve access to a broader range of services for people with chronic conditions and to provide individualized patient-centred care and disease management at a lower cost.&lt;br&gt;Clinical decision-making and prescribing become more effective (less errors) because of access to evidence, guidelines, second opinions, electronic records and because of easier communication between health care providers.&lt;br&gt;Some activities (diagnosis, monitoring, analysis, counselling) are available without need of a face-to-face meeting.&lt;br&gt;Medication becomes more personalized.</td>
<td>Educational institutions are responsible for ensuring that all PHC workers have appropriate e-skills, which are upgraded on a continuing basis through in-service training and life-long learning.&lt;br&gt;The use of eHealth/mHealth improves productivity thanks to time-saving practices, such as less paper work and more rapid access to information. Higher productivity translates into increased availability and capacity to provide services to more users, even if absolute numbers of health professionals remain constant.</td>
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<tr>
<td><strong>New delivery models</strong>&lt;br&gt;• Home care. Pressure to reduce hospital admissions</td>
<td>Earlier discharge leads to more demanding care at home.&lt;br&gt;More services are delivered at home if possible (ageing-in-place approach in the France, Germany and the Netherlands).&lt;br&gt;Links with social care are strengthened.&lt;br&gt;More integrated services and better linkages between providers, organizations and locations of care develop.&lt;br&gt;Services and needs become better matched.</td>
<td>Multidisciplinary teams assume new functions such as home visits, monitoring at a distance and support to informal caregivers.&lt;br&gt;Multidisciplinary teams include a broader range of members: health visitors, social workers, community health workers and carers.&lt;br&gt;Interprofessional education is increasingly needed.</td>
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<td><strong>Cultural change, a)</strong>&lt;br&gt;• User characteristics and behaviour</td>
<td>Demand and utilization patterns change as health literacy improves and expectations grow in relation to information provided, participation in decisions, access to technology, quality of provider–patient communication and personalized care.&lt;br&gt;New values and attitudes to healthy behaviour and end of life create new demands.&lt;br&gt;Patients are more mobile.&lt;br&gt;Formal PHC services are often used together with alternative services (e.g. acupuncture, naturopathy and traditional healers).</td>
<td>Health workers’ communication skills and competencies in promotion and user education in self-care need to be strengthened.&lt;br&gt;More cultural sensitivity/awareness is needed to deal with patients of different ages, sexes, and social and cultural backgrounds.&lt;br&gt;Regulation of education and training of alternative/traditional health workers need to be strengthened.</td>
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<td>Cultural change, b) - Provider characteristics and behaviour</td>
<td>Forecasts of service needs have to be adapted to the expectations of younger providers, such as time to update and scale up their competencies, opportunities for mobility and better work-life balance. Providers, mainly the most qualified ones, move around more, changing locations.</td>
<td>Working conditions need to adapt: study leave, parental leave, flexible working hours, gradual reduction of workload for certain groups (older workers, parents with young children). The need for effective retention policies increases.</td>
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<td>Environmental risks and climate change</td>
<td>Climate change and environmental risks are increasingly affecting health systems around the world. Health systems need to adapt to ensure resilience.</td>
<td>Health workers need to be trained to identify environmental risks and related health problems, and to promote and organize preventive measures. Curricula and in-service training need to include the effect of climate change on health and how to respond to climatic emergencies, such as extreme weather events.</td>
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<td>Political/policy drivers - National health plan, commitment to universal health coverage, SDGs, reduction in inequities, labour policies (changes in retirement age and in contract conditions), financing decisions</td>
<td>Demand increases because universal health coverage implies extended coverage to individuals and additional services based on a PHC-oriented health system. Commitment to SDG 3c (substantially increases health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing states) increases the need for and better distribution of services. Health systems need to become more efficient and to do so they have to change several key elements including their organization of services. PHC policies should be informed by the best available evidence which requires producers of knowledge to reach out to policy- and decision-makers.</td>
<td>Greater demand for services increases pressure to make the best use of all the capacities of health workers, e.g. to review traditional scopes of practice and create new occupations of clinical non-physicians (already taking place in a number of countries). Equitable access requires a better geographical distribution of health workers, user-friendly functioning hours of services, and management strategies to prevent absenteeism and unethical behaviours (informal payments, diversion of patients from public to private services). PHC teams need to learn to take into account the social determinants of health and disease. This requires them to develop skills in the areas of promotion, prevention and patient education.</td>
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The assessment of future PHC workforce requirements to respond to the projected demand, presupposes that countries have a comprehensive picture of the current supply of their health workforce, a clear vision of what PHC they want to deliver in 5, 10 and 15 years and of its integration in the whole health system, as well as a good knowledge of the general dynamics of the health labour market (Figure 1). For planning purposes, it is critical to understand the composition of the workforce and its distribution and the factors which influence them. Of equal importance is to have valid data information on how workers enter and exit the health labour market, and how they move between rural and urban areas, between levels of care, between organizations and between the public and the private sectors.
Policy directions and levers to build a fit-for-purpose primary health care workforce

The Global Strategy on Human Resources for Health: Workforce 2030 and the report of the high-level Commission provide strategic orientation and policy options for strengthening the health and social workforce to achieve universal health coverage and the SDGs. The policy directions that each country takes to build its primary health care workforce will depend on the national context and a comprehensive understanding of the health workforce, its composition and distribution as well as factors that influence the dynamics of the health labour market.

Shifting the balance towards health systems led by primary health care and expanding access to primary health care health workers where demand and need are at the highest requires securing strong political and population support for change.

This section presents priority policy levers for building a fit-for-purpose primary health care workforce. While the policy options and interventions are presented separately, in practice, single, one-time, one-dimensional interventions are less likely to be effective or produce sustainable results.
1. Understand the health workforce profile to define the need and the scope for primary health care workforce change. An analysis of the health labour market informs the development of a comprehensive vision for the health workforce that is consistent with national health policy and objectives, and supports setting priorities and planning investments for the primary health care workforce. National health workforce accounts provide the core indicators needed to conduct an analysis of the health labour market (9).

2. Align education programmes (basic, in-service and continuing), learning content and methods with people-centred practice as well as community and population needs. Socially accountable strategies, such as decentralizing education programmes and expanding rural health training, improve the availability and distribution of health workers, particularly in areas where care is most needed. Beyond technical skills, students need to develop awareness of cultural differences and sensitivity to how people understand and describe health and illness, and build capacity and willingness to work in teams. Interprofessional training, for example, through joint learning activities, field work or residencies, helps internalize shared values by different occupations and facilitates teamwork. Many educational institutions still rely on academic performance only or on ability to pay tuition fees to select their students. Criteria and methods for the selection of students should include attitudinal and behavioural attributes (showing empathy, benevolence, respect and capacity to adapt to difficult situations). Innovative selection methods, such as situation judgement tests, aptitude tests or multiple mini-interviews, can be used to determine if candidates have the capacity to gain the trust of the populations they will serve in the future. Finally, the capacity and commitment of educators and trainers to provide students and practising workers with the competencies that can meet population needs and expectations is critical.
Case 1 Scaling up mental health services using the WHO mental health gap action programme in the Philippines

After typhoon Haiyan hit the Philippines in 2013, the National Department of Health, Regional and Provincial Health Office, in partnership with WHO, initiated the implementation of the mental health gap action programme (mhGAP) in Northern Samar province with the objective of scaling up care for mental, neurological and substance use disorders.

The main purpose was to provide access to mental health services at the primary care level. To build capacity among health workers, training of trainers was organized with relevant mhGAP training materials that were adapted for use. In particular, a training module for workers at the Barangay health station (community health outpost) was developed to enable them to identify and refer individuals with mental health conditions. In addition, 81 non-specialists health care providers were trained to clinically manage the cases identified. Following the initial training, 24 rural health units and four district hospitals had the capacity to use mhGAP. In all facilities, a reporting and information system was established to track the cases and the care provided. Provincial mental health officers and provincial hospital psychiatrists provided supportive supervision to health facilities including management of complicated cases.

As a result, mental health services are now more accessible and available up to the municipal level. To date, the services have been accessed by over 380 individuals and have been highly appreciated by them and their families. The timely and responsive case management has empowered affected individuals to lead productive, meaningful lives. By extending these services to other provinces, the Department of Health aims to further strengthen the vision of building long-term, sustainable mental health services in the Philippines.

Source: WHO Regional Office for the Western Pacific and WHO Country Office, Philippines
3. Optimize the existing workforce by promoting teamwork with the appropriate skill mix, with health workers operating within the full scope of their profession, and avoiding underutilization of skills. Of particular importance is to ensure decent working conditions that are sex- and age-sensitive, including compensating workers for unpaid or informal health care work. Financial and other incentives linked to team productivity, e.g. the achievement of measurable production and quality targets (satisfaction of users, vaccination coverage and screenings), can be introduced; however, evidence shows that pay-for-performance mechanisms must be well designed to be effective (24). The effective use of technologies (telemedicine, m-health and e-health) and access to diagnostics and laboratory equipment is key for improved performance. Other important strategies include regulating absenteeism and dual practice in the public and the private sector.

4. Improve access in underserved, urban peripheral and remote areas where demand and need for primary health care workers are the highest. On the shorter-term, governments can gradually change the distribution of health workers between PHC and specialized, hospital-based care. Longer-term strategies require training more health workers through expanding the capacity of existing institutions and/or creating new ones. Some countries opt to reducing the training time, including through technical and vocational education and training (TVET), and offering fast-track programs accessible for candidates who already hold a first degree, as is the case in many nursing schools. These strategies would need to be combined with measures to reduce the number of students who do not complete their studies. The identification of the reasons for attrition helps design interventions to support, financially or pedagogically or both, to students who consider leaving.
Prioritizing “rural pipelines” to health, expanding rural health training, and including early exposure to learning and practice in the community are means to achieving rural recruitment and retention, and to advancing social accountability in education. This includes offering scholarships to students linked to commitment to return to their region of origin to work and giving students additional support to help them meet the academic requirements of their study programme. These measures can be combined with exposing all students to regions with unmet needs through field visits, placement rotations which should be performed with adequate preparation and supervision (25).

Making community or rural service compulsory is a good option to augment accessibility to health workers in the short term, but it has limited effects on retention for the longer-term (26). Adequate preparation to work in a resource-constrained setting and the prospect of future employment afterwards increase the likelihood of it being accepted by graduates. Establishing occupations with new and advanced roles increases the stock of health workers as a means to make more services available to populations with unmet needs. Examples include advanced practice nurses, clinical officers, community health officers, medical assistants, nurse associates, nurse practitioners and physician associates, representing over 25 titles and functions in more than 50 countries around the world. Recruiting community health workers to reach out to populations with poor access to qualified health workers is common in many countries, such as accredited social health activists in India, behvarz in the Islamic Republic of Iran, community health agents in Brazil, health extension workers in Ethiopia or lady health workers in Pakistan. To be effective, community health workers need to be integrated in the health system and part of the health team, properly supervised and remunerated (27). Finally, there is a need to attract more students, particularly from non-traditional recruitment pools, for example recruiting men to the nursing profession. In countries with a large population of young people, the first step may be to strengthen secondary education to prepare more candidates to enter higher levels. In the shorter term, filling empty rural positions can be done by contracting out to individuals or organizations, such as faith-based organizations or other nongovernmental organizations.

Case 2 The Rural Generalist Program in Queensland, Australia

The Rural Generalist Program in Queensland, Australia covers a population of 5 million spread over an area of 1.85 million km2. The program provides a coordinated postgraduate training pathway to accredited rural medical practice. The pathway is promoted successfully to medical students and later career entrants as a tailored program to provide first-rate training to a credentialed specialty of Rural Generalist Practice incorporating accredited rural family medicine, rural hospital and emergency care, population health and an advanced skill in obstetrics, anaesthetics, surgery, indigenous health, emergency medicine, remote health, internal medicine, mental health, paediatrics. The program was first established in 2007 and now has an intake of over 70 graduates per year (target 70). Over 180 doctors are currently practicing in rural Queensland. The program has no compulsion or scholarship components and is fully subscribed. It is complemented by opportunities for graduates to make full use of their skills and remuneration comparable with medical specialists in other fields. The program has spawned an allied health rural generalist pathway and discussions are ongoing around developing a similar initiative for rural nursing.

Source: Department of Health, Queensland
5. Create primary health care specialties in dentistry, medicine, nursing, pharmacy, public health and social work to train workers with specific competencies in prevention and health promotion and in dealing with the management of risk factors and chronic conditions, which require coordinated and continuous care. This would help give recognition to work in primary health care. To be attractive, these specialties should have the same advantages as other specialties. A critical mass of primary health care specialists in a country not only improves the quality of care but also strengthens training capacity, stimulates research in primary health care and supports the process of change.
Case 3 The family doctor and nurse programme in Cuba

The family doctor and nurse programme was launched in Cuba in 1984 and is the third phase in the evolution of the model of care for the national health system since 1959. It is the concept on which the Cuban health system based its people- and community-centred model of care and where the strategy of primary health care is best expressed.

It consists of a doctor and nurse team that covers between 200 and 250 families (1000–1500 people) with responsibility for a specific territory. This includes a health situation analysis of the territory to plan resource needs for disease prevention, health promotion and the provision of good-quality health care, including referrals to secondary and tertiary levels, and follow-up in the community after discharge to ensure continuity of care. The family doctor and nurse team is the pivotal link between the health system, the community and other sectors that may affect the health of families. Both the doctor and the nurse can undertake continuous training, including a specialty in family medicine, so they can progress in their careers. The doctor and nurse team is linked to an outpatient unit, a polyclinic (one polyclinic covers between 25 and 30 cabinets), which provides the first level of care with diagnostic and treatment capacities from a basic team of specialists which supports the family doctor and nurse teams.

This programme ensures universal health coverage and universal access to services. Teamwork is the philosophy behind the doctor and nurse teams and close interaction with the population is the way to ensure social and community participation. This approach has become an example for the Region of the Americas.

Source: WHO/PAHO country office, Cuba

6. Review and change regulations where these are impeding progress to achieving a health workforce that is focused on primary health care, particularly in terms of new and advanced roles. Strengthen accreditation and make it compulsory for educational institutions and programmes. Only graduates of accredited schools should be authorized to register to practice. Accreditation should cover all professions and preferable be under the responsibility of an independent agency which specifically focuses on health professional education, rather than covering the whole range of higher studies. Strengthen the capacity of professional councils, as guarantors of the quality of practice and of ethical behavior of their members, to produce practice guidelines and protocols in collaboration with national and international professional associations.

7. Introduce adapted and flexible packages of incentives to attract and retain health workers. Evidence shows that financial incentives alone (e.g. higher salaries, subsidies and cheap loans) are necessary but not sufficient to attract and retain health workers in understaffed zones (28). Professional incentives (possibilities of career development and progression, participation in support networks, access to mentors and to on-site training and supervision and access to telehealth), and personal and family support (housing, transport, education of children and work for spouse) are needed (29).
8. **Stimulate demand for primary care services** by adopting organizational measures to make primary care services attractive to users. This includes defining hours of attendance that suit users, regulating the flow of users and relieving the pressure on workers’ time, improving the quality of reception, which requires that first contact staff be trained accordingly, and offering users a secure, clean and welcoming environment. Promoting insurance schemes guarantees that access to a health worker does not depend on ability to pay. By pooling resources, insurance mechanisms also contribute to the sustainability of the health workforce if remuneration is attractive and guaranteed. Where offering fixed services is not feasible, mobile teams can be used to reach out to isolated populations as well as virtual health care.

9. **Strengthen policy development and effective planning capacity** of the health workforce in support of decision-making and good governance. Technical capacity is needed in data collection and analysis, building and managing information systems, needs assessment, research, forecasting, scenario-building, advocacy, intersectoral negotiation, and engagement of stakeholders (including capacity to negotiate with aid agencies and foreign nongovernmental organizations in countries receiving aid).

10. **Improve management of health worker migration flows and mobility** that is consistent with the principles of the WHO Global Code of Practice on International Recruitment of Health Personnel (30). Strengthen the governance and cooperation with respect to the flow of international health worker with targeted support to primary health care.

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**Case 4 Providing community-based rehabilitation services in Fiji**

In 2013, the Government of Fiji started the mobile rehabilitation service that offers multidisciplinary services in primary care for patients with physical impairments. Led by a rehabilitation physician, the team also includes a nurse, community rehabilitation assistant, and prosthetist/orthoptist. The service is provided at the patient’s home, free of charge. By providing community outreach, the service promotes more equitable access to health services. This has the knock-on effect of promoting social and empowerment opportunities for people with disabilities. In addition, the team offers frequent training and follow-up support to ensure that the assistive devices are well-maintained.

This comprehensive, people-centred approach has had life-changing effects. Menani, a 64-year-old woman, suffered from a below-knee amputation as a result of diabetes-related complications. In a timely intervention, the mobile team fitted her with a prosthetic leg at her home, considerably improving her quality of life. In another case, a 67-year-old man with spastic paraplegia was visited by the team every three months to provide counselling on aspects such as wound management, positioning and bowel care. As a result, he is now able to confidently move around his community.

By providing rehabilitation services within primary care, the mobile rehabilitation service in Fiji is able to promote people-centred care to people living in geographically dispersed areas. This is a highly inclusive approach that supports equity-focused health outcomes and advances the universal health coverage.

*Source: WHO Regional Office for the Western Pacific*
Stakeholder engagement: implementing a successful primary health care workforce reform

There are major benefits to expect from a solid health workforce policy and from its primary health care workforce component. Beyond the health and well-being gains, there are economic benefits through higher participation in the labour market and higher productivity of healthier people, and savings on secondary and tertiary care as primary health care workers can attend to most needs and limit the inappropriate use of specialized services. In addition, the creation of decent jobs has a non-negligible multiplier effect on local economies. Finally, there are social and political benefits in terms of more solid social cohesion and stronger trust in educational institutions and organizations delivering care.

Most shortcomings in the primary health care workforce are multidimensional and require multifaceted policy interventions and the collaboration of numerous stakeholders. Clarity on what is needed and planned, how it can be achieved and at what cost is an indicator of good governance and transparency. It is also the first element of successful advocacy, which is needed to mobilize collaboration of other sectors such as ministries responsible for deciding on increasing the number of educational institutions or places in existing ones. Health professional schools and accreditation bodies can also be involved in this type of decision.

The production of more primary health care workers requires an initial capital investment in existing and new educational institutions and recurring resources to cover the costs of the remuneration of additional health workers and of equipment, supplies and consumables. In addition, more health workers generate more services and health expenditures automatically rise. The ministry of finance mainly decides on the allocation of resources to the health sector. The labour and public service sectors are responsible for the integration of more workers in public services and on changes in working conditions, e.g. types of contracts, remuneration methods, career patterns and retirement age. Parliament and law makers have the authority to modify scopes of practice or to create new professional councils, with the whole government involved in designing national policies, such as the national health policy or a health workforce plan. In countries where international donors are present, these must be engaged so that they harmonize their support interventions with the primary health care vision and objectives.
In addition to these institutional stakeholders, health sector policy-makers need to engage other stakeholders that are involved in workforce reform and whose collaboration is needed. Some, such as registration bodies, professional councils, educational institutions and professional associations and unions, are the owners of important data and information required for planning. Many interest groups may oppose curriculum reform (educators, students), the creation of new cadres or the expansion of the functions of existing ones (professional councils or trade unions). The objectives of planners may be based on consensus, but the ways to achieve them may hurt the real or perceived interests of many stakeholders, who then have to be convinced to support change or at least not oppose it.

Last but not least, political commitment over time, from one government to another, from one minister of health to another, is the foundation of the successful implementation of reform because the process of building the primary health care workforce is a long-term one undertaken over a period that is generally longer than the length of a typical political cycle.

**Conclusion**

The successful renewal of primary health care requires investments in not only a larger workforce but also one that is adapted to the new context and population needs. Planning based on a valid analysis of the present situation, a clear vision of future service needs, and the principles of people-centeredness and equity is the best way to achieve primary health care, with better integration of primary and referral care. The challenge now is to translate the commitments to make primary health care a reality. Strong and continuous political support and leadership at the highest level are required, as the collaboration of many sectors, e.g. education, labour, public administration, finance, is indispensable. Stakeholders need to be mobilized and engaged right from the start of the change process and remain involved all along, motivated by the common objective of ensuring healthy lives and promoting well-being for all at all ages. Countries will need to develop or strengthen their institutional, organizational and individual capacities to attain this objective. The Global Strategy on Human Resources for Health: Workforce 2030 and the report of the United Nations High Level Commission on Health Employment and Economic Growth propose changes based on the best available evidence that can be adapted to each country’s context. WHO and its partners will monitor progress and evaluate policy interventions to strengthen primary health care services and share this knowledge to help countries learn from each other. Many countries are already actively engaged in transforming their health workforce to make it more people-centred and community-oriented. The objective is that by 2030, all countries will have done this and that their population will be reaping the benefits of effective and resilient primary health care services.
References


