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Getting Skills Right

Flexible Learning Pathways into Healthcare Occupations

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Foreword

Skill shortages and skill gaps in the healthcare sector are costly and contribute to significant unmet medical care needs. In many countries, there are not enough health and care workers, and many of the existing health and care workers do not have the skills needed to carry out the tasks and responsibility required by the healthcare system. The limited offer of flexible career and training pathways are preventing many adults from upskilling and reskilling to enter the health and care workforce. This work builds on previous initiatives undertaken by the Organisation for Economic Co-operation and Development (OECD) and the International Labour Organization (ILO) in the area of skills for the health and care workforce. It aims to highlight new and innovative policies to encourage and enable career transitions to the healthcare sector for entry-level occupations and to support informal health and care workers in formalising their skills and experience, with the objective of expanding the health and care workforce.

This report provides an overview of practices to increase flexibility in career and training pathways in a selection of OECD countries and low- and middle-income countries in South Asia, Southeast Asia and Africa. The analysis is based on extensive desk research and interviews with relevant institutions and stakeholders.

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Executive summary

Previous work on anticipating skill needs by the OECD and the ILO, with the contribution of the WHO and with the support from the ILO-OECD-WHO Working for Health (W4H) Programme and Multi-Partner Trust Fund, has shown that labour and skill shortages, as well as mismatches, in the health and care workforce are pervasive, as discussed in *Equipping Health Workers with the Right Skills: Skills Anticipation in the Health Workforce.* Additionally, evidence from the Survey of Adult Skills (The Programme for the International Assessment of Adult Competencies, PIAAC) and from online job vacancies in several countries (e.g. Canada, the United States and the United Kingdom) shows shifts in the responsibilities and tasks that are required by professionals working in the healthcare sector, driven by the adoption of new technologies or the move towards integrated healthcare, which are further exacerbating skills gaps.

This report reviews policy initiatives in a select group of countries that are increasing flexible entry points into the health and care workforce. It covers policies in 19 OECD and low-and medium-income countries: Australia, Austria, Brazil, Canada, Denmark, Germany, Iceland, India, Japan, New Zealand, Norway, Philippines, Spain, South Africa, Tanzania, Thailand, the United Kingdom, the United States and Zimbabwe. The aim of the report is to identify innovative uses of flexibility in adult learning in the healthcare sector and highlight policy tools that are available to policymakers who wish to facilitate transitions to entry-level health and care occupations.

Skill gaps and shortages in the healthcare sector are costly, contributing significantly to unmet medical care needs. While increasing enrolment in comprehensive higher education programmes for doctors and nurses and introducing new technologies can help, they cannot fully close these gaps. This report explores pathways into entry-level health and care positions (which are defined as positions in the healthcare sector that require less than a bachelor's degree, as healthcare assistant, therapy support worker and associate ambulance practitioner) and examines policies that help both adults without healthcare experience and those with some healthcare experience (such as long-term care workers often employed informally, or community health workers without formal health training) transition into the healthcare sector. Flexible career and training pathways into entry-level health and care professions offer an effective solution to help address these challenges and create opportunities for workers, particularly those with lower skill levels, while potentially alleviating some of the shortages faced in entry-level jobs as well as in higher-skilled health and care workers through task reallocation.

The limited offer of flexible training programmes is preventing many adults from participating in healthcare training. This is particularly true for entry-level occupations (such as for long-term care workers, nurse assistants and community health workers) where there are fewer flexible training programmes for adults wishing to take up these jobs, while there are more training options for workers already in the healthcare sector. This poses a challenge for entering the healthcare sector, as lack of time, financial reasons, and inconvenient training time and place are the main barriers to participation in training for adults. Comprehensive, full-length, full-time, formal education programmes take a long time to complete and might not attract enough adults to address the skill shortages and skill gaps observed in the healthcare sector. In this context, making adult learning provision more flexible is crucial, and needs to be paired with

infrastructural investment and expansion of licenced positions, particularly at the community level. Flexible training can be provided in several ways:

- **Modular learning and micro-credentials** for entry-level health and care occupations are rare, but some countries have started implementing modularisation. Denmark's Adult Vocational Training Programme (Arbejdsmarkedsuddannelser) in health and social work and the Philippines Ladderized Education Program in Health is now modularised, and participants can obtain certificates for smaller units of training that are recognised by the labour market and the education system at wide.
- A strong **connection between adult education programmes and healthcare providers** equips learners with enhanced career prospects and better prepares them for the real demands of the health labour market. These partnerships include elements such as job-related curricula, workplace learning, apprenticeships, and mentoring programmes to highlight the career pathway from training to employment. The examples of the Eixample Clinic Vocational Training Institute in Spain – where students are placed in public and private healthcare institutions under the supervision of an internship tutor – and the United Kingdom's NHS apprenticeship programme – which offers adults the opportunity to gain qualifications through a blend of workplace learning and classroom training – demonstrate the benefits of a strong and flexible connection between education and healthcare sectors.
- **Distance and online learning** allow adults to participate from anywhere, reducing barriers related to physical attendance. Asynchronous learning, like pre-recorded video lectures, reduces time barriers by allowing learners to study from home at their convenience. For example, the Health Education England's eLearning for Healthcare platform delivers more than 400 eLearning programmes and is available for adults enrolled in the NHS Apprenticeship training programme (entry-level training), NHS employees (upskilling), and for learners enrolled in partnership programmes with the NHS. In India, the Project Extension for Community Healthcare Outcomes (ECHO) initiative leverages telemedicine and digital platforms to connect healthcare providers in remote regions with specialists in urban centres, facilitating real-time knowledge sharing and capacity building.

The recognition of prior learning including outside the healthcare sector is a key factor in making the skills and competences of workers visible, enabling formalisation, and boosting work mobility. By focussing on the individual's prior experience, recognition of prior learning programmes can speed up the pace of an education programme through the certification of learning outcomes. Although recognition of prior learning can be used to validate candidates' practical skills and theoretical knowledge, in the specific case of healthcare programmes, validation of practical skills tends to be more common. In relation to long-term care, where many often already experienced carers, particularly those working informally, have not gone through formal training, the recognition of prior learning can constitute an important incentive for workers to take-up training to improve their skills. It also improves their working conditions and opens up new employment opportunities. In order to enable the use of recognition of prior learning, the skills and knowledge used in these jobs need to be mapped in occupational standards, for which candidates can be evaluated against. In South Africa, the RPL system is anchored in the National Qualification Framework as well as integrated into the South African Nursing Council's policy. The Caregiving (Elderly) and Barangay NC II programmes in the Philippines offers Recognition of Prior Learning (RPL), enabling candidates with informal work experience in the care sector to have their skills assessed through practical demonstrations and interviews. New Zealand's Careerforce is a multi-dimensional programme that utilises recognition of prior learning to shorten training pathways for adults working in the healthcare sector without qualifications. Finally, the recognition of prior learning and experience can be used as a more structural tool to strengthen training programmes and formalise career transition pathways between certain complementary but distinct occupational groups. Programmes to facilitate and encourage the transition of

army personnel into the healthcare sector in the United Kingdom and the United States are examples of this type.

Successful implementation of flexible pathways that incorporate RPL and modular learning must rely on standardised taxonomies for health occupations, skills and competencies and referencing to well accepted qualifications, to ensure consistency in workforce planning, access to decent work and support worker mobility. The development of new qualifications in emerging areas, such as digital health, geriatric care and community-based services, is equally critical to meeting the evolving health needs of diverse populations and fostering innovation within the workforce. Reference frameworks, such as The ILO Core Skills Framework and the WHO Global competency and outcomes framework for the essential public health function provide valuable guidelines to align training content with international benchmarks, ensuring that health and care workers acquire the essential skills and competencies needed for high-quality care.

Healthcare involves many different specialities and professions working together, with (very) different training requirements, and few opportunities to move across specialties. **Career guidance assists adults to make educational, training and occupational choices.** Canada's Health Career Access Program is a notable example of career guidance specifically designed for adults wanting to transition into the healthcare sector for the first time. Career guidance can also be instrumental in attracting applicants from non-traditional groups to the healthcare sector, helping to address critical labour shortages that cannot be filled by (only) recruiting traditional candidates. Norway's "Men in Health" programme is an interesting example of this approach, as it supports unemployed men in gaining qualifications and employment for health and care roles where they are underrepresented. For workers already in the health sector, career guidance could be used to encourage them to move to new emerging health and care jobs where there are shortages.

Although the use of flexible pathways for entry-level health and care professions is somewhat limited, training requirements for personal care workers in the long-term care sector, including those who work in institutions, remain low, despite the growing complexity of care of older people. LTC workers are often low paid and face poor working conditions and limited career prospect. Expanding training opportunities for LTC workers could facilitate transitions into formal employment, help achieve the right balance of skills, improve the quality of care, and enhance working conditions. Countries such as Australia, Austria, Germany and Iceland have increased training specifically focussed on long-term care needs.

Impact assessment is a key component of policy implementation. Beyond evaluating benefits for individuals, it is important to assess how training and educational pathways to access entry-level health and care occupations affect the overall healthcare system, including having an impact on the quality of care or by alleviating shortages among doctors and nurses through task reallocation. Furthermore, it is important to understand whether the implementation of flexible pathways leads to employment that provides an entitlement to social protection and basic rights at work, as happens with the Barangay Health Workers (BHWs) in the Philippines. However, such evaluations are rare, as the effects of broadening the talent pool in entry-level occupations take time to materialise, are difficult to disentangle from other influencing factors, and available data on the long-term outcomes of these policies are often scarce and incomplete.

Recommendations

To develop flexible pathways into entry-level health and care professions, this report recommends the following key interventions:

- Incorporate modular learning strategies, flexible content, and leverage new technologies to allow adults to retrain for the healthcare sector. Flexible pathways would accommodate adult learners,

particularly those with time constraints or with lower levels of prior education and help accelerate health and care workforce entry.

- Expand recognition of prior learning to facilitate workforce transitions. To make health and care careers more accessible and reduce skill shortages, governments can expand recognition of prior learning, for example for LTC workers employed informally and individuals with practical experience in related fields. This would facilitate the formalisation of informal workers by the recognition of their skills and knowledge, and open new opportunities for career progression and transition into entry-level health and care occupations.
- Improve access to career guidance for individuals considering job transitions from outside the health sector or within. Governments can invest in awareness-building programmes to highlight career pathways and transitions to the healthcare sector, including for underrepresented groups. Tailored career counselling can encourage individuals with relevant experience or interest, but lacking formal qualifications, to enter the healthcare sector. Such awareness building would help people better understand the variety of career opportunities and dispel misinformation about the role and tasks of different health and care workers.
- Strengthen public-private partnerships to align training with labour market demands and attract a broader range of adult learners. Partnerships between educational institutions and healthcare providers can ensure that training courses are better aligned with the skills needs of the healthcare sector, and improve job readiness, provide career pathways, and facilitate transitions from training to employment.
- Map the skills and training needs (both current and future) of different health and care occupations, in co-operation with workers and employers' representatives and make this intelligence available in user-friendly and accessible online tools. Highlighting the employment opportunities and training requirements of entry-level health and care occupations can help individuals manage their career transitions. Combining this with information about training provision can further boost enrolment in training and improve the matching of training and workers' needs. This information can further be used to strengthen health labour market analysis.
- Develop or link to existing transparent monitoring and evaluation mechanisms that assess the impact of measures to implement flexible pathways over coverage and quality of healthcare provisions, as well as the working conditions and rights of trained professionals.

1 Introduction

Context

Previous work on anticipating skills needs by the OECD and the ILO, with the contribution of the WHO and with support from the ILO-OECD-WHO Working for Health (W4H) Programme and Multi-Partner Trust Fund, has shown that labour and skill shortages, as well as mismatches, in the health and care workforce are pervasive (OECD/ILO, 2022[1]). Enabling entry into the health and care workforce is paramount to address these shortages. Labour-market entry can be facilitated through a range of policies beyond initial education, through the fostering of flexible career pathways. Flexible career pathways provide workers with multiple entry points into health and care careers. The objective of this report is to examine the policies that support flexible career and training pathways to entry-level jobs in the healthcare sector and present examples of good practices in selected OECD and low-and middle-income countries.[1]

Shortages in the health and care workforce are reported in many countries across the world. Mostly due to demographic change, population ageing will likely increase the demand for health and care workers while at the same time, ageing of the health and care workforce will lead to increased strain on provision as a large number of current health and care workers will retire in the near future. Shortage in the healthcare sector exist both in terms of numbers of professionals and in terms of the skills needed to work with a new epidemiological and socio-economic profile of populations, new technologies, and to adapt to new tasks. These shortages have been documented in detail in previous work (OECD/ILO, 2022[1]).

The consequences of skill gaps and shortages in the health and care workforce are particularly costly. They can increase patient waiting lists, create an overload of work for the staff available, increase burnout and reduce job satisfaction among medical staff, and ultimately result in poor patient care (Kane et al., 2007[2]; Jun et al., 2021[3]). These costs come in addition to the negative economic consequences usually associated with skill mismatches and shortages in other sectors of the economy, including lower productivity and growth (OECD, 2016[4]). A projected global shortage of 11.1 million health and care workers by 2030 underscores the urgent need for sustained investment in education, professional development and recognition systems, supported by stronger quality assurance mechanisms to ensure meaningful competency validation and workforce readiness (World Health Organization, 2016[5]; Noyes et al., 2020[6]).

Shortages and geographical variation in the health and care workforce are likely to explain a large part of the unmet needs for medical care. In 2021, on average across OECD countries, 2.3% of the population reported having unmet healthcare needs due to waiting times, cost and distance. However, the average masks large differences between countries, with unmet needs affecting 8% of the population in Estonia while being negligeable in Germany and the Netherlands.

In Southeast Asia, substantial advancements have been made towards achieving universal health coverage. The Universal Health Coverage (UHC) Service Coverage Index (SCI) has increased by approximately 30 points between 2000 and 2019 for the region, largely due to improvements in populous countries such as Indonesia. Despite this progress, the region's current UHC SCI of 61 still reflects gaps in health access. In South Asia, the average UHC SCI reached 53 points as of 2020, with most countries

showing improvement since 2017. Currently, approximately 3.1 billion people globally lack effective UHC coverage, with nearly one-third of this population residing in South Asia (Lozano, Rafael et al., 2020[7]). This underscores the urgent need to address health inequalities.

In the WHO Africa region, population growth is outpacing the growth of health workers. Though there was a growth in number of health workers between 2018 and 2022 in 37 countries in the region, the workforce density per 10 000 population increased in only 29 countries (WHO, 2024[8]). This illustrates that populations are growing faster than the workforce development rate. Eight[2] countries increased their stock of health workers, but population growth outpaced it, while ten[3] countries saw their number of health workers and their density reduce in the same time period. Though in 2030, the health workforce is anticipated to increase by 40%, the region is still expected to face a 6.1 million needs-based shortage of health workers if its disease burden is to be tackled (WHO, 2024[8]).

Objective of this study

This study is a collaboration between the OECD and the International Labour Organization (ILO). The objective is to provide a characterisation of skill development practices to promote flexible pathways into health and care occupations across a range of countries. The study focusses on flexible training pathways in the health and care sector in South and Southeast Asia, Africa and the OECD, encompassing primary care, community health and long-term care in diverse settings such as hospital clinics, health centres and community facilities.

The study employed a mix-methods approach, combining primary and secondary research. A series of online consultation and interviews were conducted with stakeholders from selected countries. These discussions provided detailed, context-specific insights into workforce challenges and innovative strategies to address them. An extensive literature review was undertaken, focussing on publications primarily from the past five years to ensure relevance and accuracy.

This study aims to provide an insight into strategies and tools for flexible training pathways that directly target existing skill shortages and gaps. The goal is to identify innovative initiatives and programmes for training new health and care workers and identify components of those programmes that make training more accessible and achievable. However, flexible training does not exist in a vacuum and is influenced by a range of policies in the wider adult learning ecosystem, such as training leave, financial support, quality of training, policies for worker satisfaction and retention, and multi-sectoral dialogue between health providers, education providers and policymakers. As the study focusses on components of training policies in order to extract a set of tools or methods to increase flexibility in training, these contextual policies are not covered by the study explicitly, however, they remain crucial in ensuring a supportive ecosystem for adults navigating the world of work in the health and care sector.

While flexible training pathways are an opportunity to expand health and care training to new and underrepresented groups, they should not lead to low-quality jobs. All flexibility policies should include principles of decent work, ensuring fair wages, social protection, occupational safety and health standards, and career progression. This is especially true for long-term care workers and community health workers, which are often employed on an informal basis. As such, flexibility principles should be seen as a way to expand decent work to more people, and not to be misused to legitimise the under-skilling and underpaying of health and care workers.

Box 1.1. Defining adult learning for entry-level positions in health and care: Terminology

Adult learners: Adult learning is understood here as the job-related learning of adults who have left initial education and training and entered working life. Job-related learning refers to education and training undertaken for the purpose of acquiring skills for a current or future job.

Comprehensive education programme: Defined structured curriculum intended to deliver a complete set of skills and knowledge in contrast to "modular" or "flexible" programmes. There are sometimes referred to as "traditional full-length programmes" and are often multi-year full-time programmes. Examples include full-time vocational degree programmes or bachelor's degree studies.

Entry-level positions: Occupations that fall within the categories of health associate professionals that require an formal qualification but in some cases relevant experience and prolonged on-the-job training may substitute the formal education, or person care workers in health services which do not always require formal qualification but do require relatively advanced literacy and numeracy skills and good interpersonal communication skills (WHO, 2019[9]). Also referred to as "support-level health and care roles" or "foundational health and care roles". These occupations have a hands-on, essential function in patient care, often with less stringent educational prerequisites. This includes several categories of *health associated professionals,*[1] such as paramedical practitioners, nursing and midwifery associate professionals, ambulance workers, as well as *personal care workers* engaged in the healthcare sector such as healthcare assistants.

1. Core occupations in the healthcare workforce as defined by ISCO-08 (WHO, 2010[10]).

Source: OECD (2023[11]), "Flexible adult learning provision: What it is, why it matters, and how to make it work", https://www.oecd.org/content/dam/oecd/en/topic/policy-sub-issues/adult-learning/booklet-flexibility-2023.pdf.

Alone, initial education policies are not sufficient to address these challenges

Policymakers in most countries have attempted to address shortages in the healthcare sector through initial education policies, notably increasing the number of graduates for the occupations most in need. Many countries impose numerus clauses on comprehensive education programmes for doctors, nurses and other highly specialised health professions. In Southeast Asia countries have made significant investments of the past decade to enhance the supply of doctors, nurses and midwives, which has increased by 69.3% since the 2015. In India, for instance, 379 new medical colleges have been established since 2014 (WHO, 2024[12]).

Most of the accreditations provided by higher education institutions (such as physicians, nurses, midwifes, dentists and other) are strictly regulated within each country. International regulatory standards have also been developed over the last decades.[4]

Given the length of education programmes for health and professionals, adjusting student enrolment in comprehensive qualification programmes is not a short-term solution to shortages. It is also costly as it involves training new health and care workers using lengthy degree programmes, and policymakers risk over-correcting the number or students in response to fluctuations in perceived or real shortages or surpluses (Ono, Lafortune and Schoenstein, 2013[13]). On average, with slight variations across countries, undergraduate training lasts 3 years for registered nurses and most allied health professionals, such as midwives, physiotherapists and occupational therapists. Undergraduate training for doctors and dentists usually takes 5-6 years, and further postgraduate training for doctors varies from 3 to 8 years, depending on the specialty (Anderson et al., 2021[14]). Consequently, there is a significant time lag in the effects of the

policies due to the long duration of the training programmes. Because of their length, these higher education programmes are unlikely to attract adult learners who have left initial education and already have considerable work experience, unless they recognise and credit candidates' existing knowledge and skills. Similarly, the introduction of new technologies could reduce some shortages, but cannot eliminate them or fill the skills gaps (Box 1.2).

Actions to retrain and up-skill adults already in the labour market or working informally in long-term care occupations through shorter and flexible training programmes can play a crucial role in addressing pressing shortages in the healthcare sector. They can help address shortages in entry-level positions directly, but they can also help address shortages of higher-skilled health and care occupations, such as doctors and nurses. Evidence using the Survey of Adult Skills (OECD, 2016[15]), suggests that tertiary-educated health and care workers spend a considerable part of their time doing tasks that require lower level of skills/competences than they are actually qualified for. As a result, flexible upskilling pathways provide an opportunity to address shortages by concentrating doctor/nurse/dentist time on doing the tasks for which they are mostly qualified for, leaving new/other categories of workers to do tasks/jobs not requiring several years of formal healthcare training.

Box 1.2. New technologies bring new solutions, but they also create demand for new competencies among health and care workers, calling for more flexible training pathways

In addition to the growing need for health and care workers, technological innovation, workforce mobility and reorganisation of work is impacting skill demand. Technology can be viewed as a valuable tool to improve the quality and coverage of healthcare services, but, alone, technological innovation cannot fill skills gaps and eliminate health and care workforce shortages.

In some countries there is a growing awareness of digitalisation and integration of new healthcare technologies as a tool to improve the quality and coverage of healthcare services and to reduce skill gaps in the sector. In Germany, the Digitalisation Strategy for Health and Care identifies shortage of skilled workers as an area which will be positively improved by the digitalisation of the healthcare sector, as services such as teleconsultations enable health and care workers to save time and see more patients (German Federal Ministry of Health, 2023[16]). For example, the introduction of teleconsultation may change the skill requirements of health and care workers by reducing the frequency of administrative tasks, while increasing the need for digital literacy, time management skills and care delivery.

However, other evidence suggests that the incorporation of certain technologies into healthcare may have little or negative impact. For example, the Norwegian Health Workforce Commission finds that there are few examples of technology development that have made healthcare service more productive (by reducing the number of workers needed to carry out the service) but rather that technological innovation often leads to increased labour and skill requirements, partly because workers are not given the training necessary to use the technology (Norwegian Health Workforce Commission, 2023[17]).

The use of artificial intelligence in healthcare opens big opportunities. But it also has the potential risk of de-humanising healthcare: if AI begins making decisions without a professional involved, it risks de-humanising care and eroding patient trust. For example, in the United States, three in five persons are uncomfortable with AI in healthcare. Additionally, there are concerns about workforce disruption due to automation (Sutherland, 2023[18]).

It is also important to note that many health and care workers, especially in LMIC, continue to struggle with accessing and effectively using digital tools. For example, internet penetration across South and Southeast Asia varies considerably by country, reflecting broader disparities in digital access. As of

2023, internet usage rates ranged from 45% in Bangladesh and 56% in both India and Nepal, to much higher levels in Southeast Asia, with 84% in the Philippines, 90% in Thailand and 78% in Viet Nam (World Bank, 2023[19]). These imbalances are also felt between rural and urban areas. Across Asia Pacific countries, internet usage stood at 80% in urban areas compared to just 52% in rural areas, further illustrating the divide in digital access (ITU, 2023[20]).

Gender disparities also remain: in South Asian and Asia Pacific countries, on average, have a gender parity score of 0.91 for internet usage, meaning that women are still less likely to use the internet than men (ITU, 2025[21]).[1] Addressing some of these gaps is essential to ensuring that all health and care workers, regardless of gender or location, can participate fully in an increasingly digital healthcare environment.

1. The score is calculated by dividing the proportion of women who use the internet by the proportion of men who do. A value below 1 indicates that women are less likely than men to use the internet.

The diversification of jobs and tasks in the healthcare sector has the potential to open up opportunities for adults already in the workforce

Health and care workers are facing new tasks and change in composition of tasks. An analysis of online job vacancies in the United States shows an increase in health and care vacancies where the job title is not explicitly linked to an occupation in the US Standard Occupation Classification, but rather to a skill. This suggests that there are new and emerging health and care jobs that are based on specific skills rather than traditional occupations such as nurses, physiotherapists, dentists, and similar occupations (Frogner, Stubbs and Skillman, 2018[22]). Recent evidence on demand for digital skills in the health sector from Canada, the United Kingdom and the United States. For example, in Canada, there is an increased demand for data collection skills (traditionally not a strong requirement for health and care workers); in the United Kingdom, a rise in demand for cybersecurity skills has been observed, suggesting a stronger focus on protecting patient data; in the United States, the generalisation of electronic health records has become essential to manage patient data, enhance care co-ordination, and improve clinical outcomes, and it has increased the demand on information management skills (OECD, forthcoming[23]).

The shift in responsibilities and tasks in the healthcare sector is also observed in the over-skilling in certain medical professions. According to evidence reported in (Batenburg and Kroezen, 2022[24]), more than three-quarters of all doctors and nurses report over-skilling in their current job, particularly advanced nurses (Master's degree or above), an indication that despite being qualified to do more technically advanced tasks many highly educated health and care professionals are still performing tasks that are below their competence level. Other studies, based on the Survey of Adult Skills, show that physicians consistently report over-skilling for some tasks and under-skilling for others (OECD, 2016[15]). Any changes in the distribution of tasks for existing health and care workers could efficiently be supported by targeted up-skilling and re-skilling programmes.

In parallel, the diversification of tasks in the healthcare sector has the potential to open up opportunities for low-skilled adults already in the workforce. Strengthening career pathways for these adults into entry-level positions in the health and care workforce has the potential to alleviate shortages not only in entry-level roles but also among more advanced professionals such as doctors and nurses, as entry-level staff can take on foundational tasks that are currently being performed by highly trained clinicians. Such a redistribution of tasks would require a mindset change to enable a reorganisation of tasks and responsibilities. For this potential to be realised, new entry points and pathways are needed for those entry-level positions to boost recruitment. A major barrier preventing adults already in the workforce from

pursuing healthcare careers is the length of training courses, their cost and strict entry requirements, particularly for those from underserved communities or with limited financial resources.

Flexible pathways to entry-level occupations would help address labour-market shortages in the healthcare sector

The transition of workers already in the labour market or informally working in care occupations into health and care professions is critical to help address shortages in the short term by boosting supply and enabling an evolution in the way different tasks are delivered within the health labour market. This will require effective systems to assess and recognise the skills of the available workforce, to identify skills gaps and to provide services and support that will address the barriers to upskilling and reskilling, as well as shorten the career pathways into the healthcare sector. Countries could provide guidance and training opportunities for workers to acquire the skills and qualifications needed to enter the health and care workforce. In addition, adults with experience of informal care could have their skills certified.

If education and training policies are to truly address skill gaps and be responsive to the labour-market needs of the healthcare sector they must be flexible, competence-based and inclusive. In fact, a number of innovative policy avenues can be exploited to address these shortages, bridge the skill gaps and enable career pathways into health and care occupations both for those already employed in the healthcare sector (either formally or informally) and those who wish to enter the health and care workforce. Traditional, multi-year, comprehensive higher education programmes are the main pillar in the supply of highly skilled workers in the health and care sector, but with the diversification of roles and tasks in the sector there is an important role for flexible training programmes and other policies that might bring aboard those for whom traditional education pathways are inaccessible. Flexible training systems, recognition of prior learning and career guidance are also policy tools that, if designed and managed correctly, can be highly responsive to shifts in labour demand such as new tasks, technological advances, migration and demographic changes.

Beyond designing flexible training programmes, equipping the health and care workforce with the right skills will also depend on successfully identifying (i) which adults can be transitioned into the healthcare sector from other sectors, (ii) which health and care workers need upskilling, and (iii) which health and care workers working informally can be transitioned into formal work contracts through flexible training programmes.

2 Enabling flexible pathways into health and care occupations

The main objective of this section is to look at career pathways into entry-level health and care occupations (such as paramedical practitioners, nursing and midwifery associate professionals, and ambulance workers) and personal care occupations (including home-based long-term care). That is, entry-level positions that are not subject to the same rigorous professional licensing process as doctors, nurses and dentists. In addition, this section looks at informal workers, for whom a formal recognition of their experience would improve their working conditions and the value of their service.

These entry-level positions include a large and diverse group of staff, and has a significant impact on health service delivery and patient experience. These workers are more likely to be recruited from the general education system and labour market, rather than from clinical training pathways. Although some members of this diverse group might have had career development plans and become managers, most have had inconsistent (or no) formal training and supervision, resulting in varying levels of competence (OECD, 2023[25]).

This section reviews policies on flexible education and training pathways into entry-level jobs of the health and care workforce. It includes innovative examples from OECD and low- and middle-income countries. It is difficult to establish a strict categorisation of the examples cited because some of the policy examples presented are very comprehensive and can cover multiple categories (e.g. flexible training, recognition of previous learning and career guidance).[5] However, for the sake of readability, the presentation is structured according to the main categories of flexible pathways instruments:

- Flexible training, including modular learning, work-based learning and online learning programmes;
- Policies enabling and facilitating the recognition of prior learning of health and care workers;
- Career guidance; and
- Programmes for the recruiting and retaining health and care professionals in medical deserts.

Impact assessment is a crucial aspect of policy implementation. Although a full review of the monitoring and evaluation frameworks for flexible pathways to the health and care workforce is beyond the scope of this project, a brief discussion on this topic is also included in this report.

Flexible training programmes

PIAAC data shows that across the OECD, lack of time for work or family reasons are the two main barriers to participation in training for adults (OECD, 2023[11]). Lack of financial resources is the third most cited reason for not participating, while inconvenient time or place comes as the fourth largest barrier. In addition, the Adult Education Survey shows that 22% of low-skilled adults, 18% of medium, and 17% of high-skilled adults mentioned the lack of suitable learning opportunities as a barrier (European Commission, 2021[26]). To address these challenges, adult learning systems need to give individuals greater choice and make adult learning provision more flexible (Box 2.1).

Box 2.1. What do we mean by flexible adult learning provision?

Flexible adult learning refers to educational and training opportunities tailored to the circumstances of adult learners, who often juggle work, family and other responsibilities while seeking to improve their skills. Unlike traditional, rigid education systems, flexible learning allows adults to move more easily between education, training, and employment throughout their lives.

Current adult learning systems still resemble formal education, requiring learners to attend classes at specific times and places, often in a traditional classroom setting. However, more flexible options are emerging globally, offering increased adaptability across four key areas: time, place, mode, and content.

- **Time flexibility** accommodates adults' busy schedules by allowing them to choose when to learn, how long to engage, and how much time to dedicate. Courses can offer part-time options, asynchronous learning, and flexible start and finish dates.
- **Place flexibility** addresses the challenge of inconvenient locations. Distance and online learning allow adults to participate from anywhere, reducing barriers related to physical attendance. Distance learning was initially limited but expanded significantly during the COVID-19 pandemic.
- **Mode flexibility** caters to different learning preferences, combining online and in-person elements. Blended or hybrid learning environments, where instruction is delivered both online and face-to-face, are becoming more common. This approach reduces commuting time and offers learners flexibility in how they engage with course material.
- **Content flexibility** allows for personalised learning pathways. Modular courses offer learners the choice to study topics in a sequential or concurrent order, and advances in learning analytics are enhancing personalised education. This flexibility enables adult learners to pursue specific skills relevant to their career and personal goals.

Source: OECD (2023[11]), "Flexible adult learning provision: What it is, why it matters, and how to make it work", https://www.oecd.org/content/dam/oecd/en/topic/policy-sub-issues/adult-learning/booklet-flexibility-2023.pdf.

Modular learning can enable adults to obtain healthcare qualifications in their own time

Training for entry-level jobs in the healthcare sector needs to be relevant, job-related and accessible to adults. A tool for diversifying learning pathways is through the provision of modularised learning opportunities. Modularising adult learning provision means breaking down a learning programme into several self-contained parts each with their own learning outcomes. The modules are linked to a national qualification framework so that each part can be separately certified. As a result, learners may be able to obtain partial qualifications on completion of each module, and thus gain recognition of training without having to complete a full programme. In addition to being linked to national qualification frameworks, good-practice training modules should align with the WHO global competency framework for universal health coverage. Micro-credentials, for example, are a form of modularised learning and can be stackable to achieve a full programme and portability across institutions.

Currently, flexible training for adults who are not yet have a qualification for a health and care profession is rare. Most training providers focus short, targeted modules to professionals that have already completed their foundational entry-level degree but want to top-up their expertise, also known as upskilling (as opposed the reskilling which enables workers to enter a new sector). Modular learning and micro-credentials are becoming more prevalent in upskilling programmes in higher education institutions, offering

specialised certifications for the existing health and care workforce. For example, in Ireland, public universities are expanding their offerings of shorter, standalone courses for healthcare professionals, such as nurses and doctors, who seek to acquire new specialisations as part of their lifelong learning. Similarly, the Australian National Qualification Framework enables training providers to offer modular training courses to become a registered nurse (skilled healthcare professional with a Bachelor of Nursing), with the prerequisite being that the candidate is already an enrolled healthcare professional with a Diploma of Nursing from a technical and further education institution. This sets the healthcare sector apart from other sectors, which are offering flexible learning also for entry-level jobs. However, some initiatives to enhance flexible training for entry-level healthcare jobs are emerging.

In Denmark, reforms to the wider VET sector have had positive spillover effects, as they have enabled a more flexible learning and career pipeline in the health and care sector, as well as other sectors. The adult vocational training programmes (Arbejdsmarkedsuddannelser, AMU) offer short, flexible and modular training programmes for labour-market entry in the pedagogical, social and health area. Adults can undertake training to work within seven occupations in the health and social sector, including the audiological and neurophysiological field and health and nursing tasks in both municipal health service and the hospital system.[6] These training programmes are available at all levels of vocational adult education (Levels 2-5 in the National Qualification Framework). Several courses are grouped into one module, and the learner can receive a certificate upon the completion of a module. Each course can last between a few days and six weeks, and the learner can take all courses in one continuous training programme or one-by-one at the leaner's own pace. The certificates are recognised by both the education sector for further training (VET and higher VET) and the labour market for access to employment. Similarly, the modularisation of health education programmes in VET and higher education in the Philippines (the Ladderized Education Program) is allowing students and workers to transition between VET and academic degree programmes without duplicating efforts (Technical Edcuation and Skills Development Authority, 2024[27]). As higher education institutions and VET providers develop unified curricula that allow students to earn credits for specific subjects or modules, units earned in a VET course can be credited towards a college degree. Just as in Denmark, the Philippines' system allows students to enter the labour market after obtaining a certificate for a module (as opposed to a whole degree programme), and adults can navigate the educational system according to their career needs while maintaining the potential to pursue higher qualifications later in life.

The Barangay Health Services NC II qualification in the Philippines is designed for individuals who wish to serve as frontline workers in rural communities,[7] the Barangay Health Workers. The programme targets adult individuals who have completed at least ten years of basic education or its Alternative Learning System equivalent, with good communication skills, who have volunteered for barangay health work for at least one year. The competencies covered in this qualification enable a person to assist households in identifying health problems, promote health and well-being, provide information, education, and communication (IEC) on disease prevention and control, maintain health stations, safely keep supplies and records, monitor household health status, and maintain updated records of health activities. Training is learner-centred and follows a competency-based programme, totalling 463 hours. Learners adopt individualised and self-paced learning strategies, potentially utilising institution-based or enterprise-based modalities such as Dual Training Systems or Apprenticeships. Significantly, the Barangay qualification entitles community health workers to social protection and basic rights at work, reflecting the Philippines' ratification of ILO Domestic Workers Convention (No. 189).

Multimodal learning options allow learners to take advantage of different types of training provision to suit their individual needs

Some entry-level training programmes have strengthened the connection between adult education providers and the healthcare labour market through partnerships with healthcare providers, which offer

direct training and career pathways for learners. Under such partnerships, training programmes are designed using the inputs and expertise of healthcare providers, and incorporating important components such as job-related curriculum, workplace learning, apprenticeships and mentoring programmes to emphasise the career pathway from training to employment. Implementing work-integrated learning practices can encourage adult learning as the career benefits of training are made clear throughout the training programme, and the teaching methods better aligned with adults' learning preferences.

In Barcelona, the Eixample Clinic Vocational Training Institute offers accredited vocational training and continuing education courses that are updated to reflect daily practice in the workplace for occupations such as nursing assistant and porter.[8] Since its creation in 2005, the Eixample Clinic has opted for a model of vocational training based on technological innovation, specialisation, personalisation and placements in a real professional environment. Internships are carried out from the very beginning of the course, through a model that responds to the real needs of companies in the health sector, and in continuous and collaborative learning with these companies, in order to ensure that graduates are prepared for the real demands of the healthcare sector. Learners do not need to have a background in health to enrol in the courses, and placements are undertaken in public and private health centres, hospitals and clinics following the completion of introductory theoretical classes. For example, some students can do their internships at the Hospital Clinic of Barcelona (imaging and nuclear medicine, dietetics, healthcare assistant and others). In addition, students are closely supervised during their placements by an "Internship Tutor". In addition to the practical and career-oriented elements of the training, Eixample Clinic offers online or hybrid training modes for all the theoretical modules in the programmes.

Similarly, the NHS apprenticeship programme in the United Kingdom offers adults an opportunity to gain entry-level qualifications through a blended work-place learning and classroom training programme.[9] The apprenticeship programme allows any adult over the age of 16 to obtain a qualification while working for the NHS. The NHS offers more than 100 different apprenticeships with different entry requirements, ranging from general lower secondary education (GCSE) to training equivalent to a full Bachelor's or Master's degree. Through the apprenticeship programme adults participate in both on-the-job training and classroom learning, while earning a wage for the work carried out during the apprenticeship. Most apprentices spend the equivalent of four days on work placement and one day at a training centre or college. The apprenticeship can last between one and four years, and the apprentice can gain both a competence qualification (based on the learnings in the workplace) and a knowledge qualification (based on the classroom learning) that enables them to work in an NHS job that requires a certificate of training for the healthcare sector, such as physiotherapy assistant, ambulance care assistant and dental nurse. Many courses in the classroom training component are available as e-learning courses through NHS's eLearning for Healthcare platform.

In India, the collaboration between Apollo MedSkills and the NSDC is playing a pivotal role in promoting adaptable and sustainable career pathways in healthcare. The NSDC was established in 2008 as a not-for-profit public limited company, operating under a unique public-private partnership model within the Ministry of Skill Development and Entrepreneurship (MSDE) (National Skill Development Corporation, n.d.[28]). Its mission is to "enhance, support, and coordinate private sector initiatives in vocational training, ensuring that financial barriers do not hinder skill development". One of NSDC's notable partnerships is with Apollo MedSkills, a healthcare education organisation under the Apollo Hospitals Group, which was founded in 2012 (Apollo MedSkills, n.d.[29]). Apollo MedSkills operates across 22 states with 42 training centres under its management, training approximately 6 000 candidates every three months (Apollo MedSkills, n.d.[30]). To date, over 112 000 students have been trained in various healthcare courses through MedSkills' programmes.

The organisation provides a range of entry points and modular training tailored to individuals at different stages of their healthcare careers. Both new entrants and current professionals seeking to upskill can select from a variety of skill-based and short-term courses that align with industry needs (Dubey, 2016[31]).

Digital tools, such as telemedicine and virtual classrooms enhance the flexibility of these programmes, ensuring that students are well-prepared to meet the evolving demands of the healthcare sector. Furthermore, through NSDC's RPL framework, individuals can formalise their existing skills without the need to undergo redundant training. These NSDC-certified credentials are recognised across the industry.

New technologies have opened up new ways of delivering flexible training. There is an increasing use of distance learning through online training in the healthcare sector. The COVID-19 pandemic fostered a global investment in digital infrastructure as many education and training providers had to implement online learning. This also applied to the healthcare sector, which saw an increase in the provision in massive open online courses (MOOCs) on COVID-19 training for health and care workers. Though the initial wave of online training was tailored for the existing health and care workforce, (who were at the frontline of the pandemic), online training is increasingly becoming the norm for adults training to enter the health and care workforce in OECD countries. For example, Health Education England's eLearning for Healthcare platform delivers more than 400 eLearning programmes. The training programmes are available for NHS employees for the purpose of upskilling or specialising, for adults enrolled in the NHS Apprenticeship training programme, or for learners enrolled in partnership programmes with the NHS. Providing asynchronous learning, that is training in which the instructor and the learner are not interacting with each other in real time (such as pre-recorded video lectures), can significantly reduce time barriers as the learning can be carried out from the learners' home and at a convenient time. However, for online learning to be successful it requires autonomy and self-motivation. Evidence from MOOCs (massive open online course) show completion rates as low as 10% (Rivard, 2013[32]; Murray, 2019[33]). Training providers and employers have to put emphasis on building and maintaining motivation of online learners, such as digital badges, (digital) interaction with other students and the teacher (OECD, 2020[34]).

Similarly, the Project Extension for Community Healthcare Outcomes (ECHO) initiative in India leverages telemedicine and digital platforms to address healthcare gaps across the country, particularly in underserved areas. ECHO connects healthcare providers in remote regions with specialists in urban centres, facilitating real-time knowledge sharing and capacity building. This approach is based on tele-mentoring, which allows local health and care workers to receive training and guidance on complex cases without having to leave their communities (Echo India, 2024[35]). Since its inception, ECHO India has facilitated over 4 800 tele-mentoring sessions, training more than 85 000 healthcare professionals across various disciplines. By harnessing digital tools and virtual platforms, ECHO enables healthcare professionals to continuously upskill, meeting the growing demand for more tech-savvy health and care workers.

The Spanish, UK and Indian examples show multimodal learning environments, where face-to-face teaching is complemented by online materials and activities. These learning environments allow students to experience the benefits of face-to-face interactions with their teacher and other students, while also taking advantage of the benefits of online learning. Research indicates that such flexible learning modes are more appealing to learners who have multiple commitments and have specific learning needs. Mixing modes of learning offer learners increased flexibility, satisfaction, and active engagement with learning. Additionally, flexible learning can lead to improved test scores and pass rates, though this may partly result from higher dropout rates among academically weaker students (OECD, 2023[11]). However, challenges such as technological reliability and higher cognitive demands are also reported, and some participants may struggle with digital tools, underscoring the need for further training in this area (Panda et al., 2024[36]). These findings highlight the importance of addressing both technological and logistical challenges to maximise the potential of such programmes.

Flexible pathways can help improve the professional prospects of long-term care workers

In many countries, people facing limitations in activities of daily living (ADL) and in instrumental activities of daily living (IADL) may not always receive sufficient formal long-term care (LTC) support. Among people aged 65 and over, across 22 European countries, half of individuals living at home with at least one ADL or IADL limitation reported that they did not receive sufficient formal or informal LTC support, illustrating the longstanding difficulties the LTC sector is facing in meeting demands for care (OECD, 2023[25]). Many countries in South and Southeast Asian countries are experiencing a shortage of health and care workers trained in geriatric care, coupled with inadequate healthcare infrastructure, particularly in rural areas. For instance, in India, medical students receive only one to two weeks of geriatric training, which constitutes less than 1% of their total medical education (NITI Aayog, 2024[37]). Social isolation and economic insecurity among older adults, especially those lacking access to pensions or adequate health insurance, further exacerbate the situation (ADB, 2024[38]).

Training of LTC workers helps to increase access to formal job opportunities in the healthcare sector. Although LTC jobs can be more complex than often portrayed, educational and training requirements for personal care workers are low. In fact, many countries do not require that personal care workers hold a minimum education level, and this despite the fact that mismatches in training and skills – such as specific geriatric training, health monitoring and care co-ordination – can have a negative impact on the quality of care provided. Among countries that do, the requirement varies from vocational training (Hungary, Latvia, Luxembourg, the Netherlands) to a high school certificate (Belgium and Sweden) or a technical qualification after high school (Malta and Estonia). Very few countries (Canada, Denmark, Germany and Korea) have developed a career structure for LTC workers. This situation is aggravated by the fact that the LTC workforce in the OECD is often foreign-born (22% of employment) and working informally (OECD, 2020[39]). Flexible career pathways in healthcare can help address this issue by facilitating the rapid upskilling of health and care workers to meet the increasing demand for elder care services. By providing specialised training in geriatrics, chronic disease management and home-based care, flexible pathways can assist countries in ensuring a stable supply of health and care professionals equipped to serve ageing populations, particularly in long-term care. Targeted training and innovative programmes can expand the health and care workforce and enhance care for the elderly. Further, after years of practice, many LTC workers in both the informal and formal sectors gain valuable skills. Recognising prior learning, along with additional training, can open up better career opportunities for formal workers and help informal workers transition into formal LTC jobs.

In the United Kingdom, the Skills for Care workforce planning body has launched the Care Workforce Pathway for Adult Social Care, which seeks to develop the first pathway for staff working in care roles (Skills for Care, 2024[40]). The initiative maps role categories in the care sector with definitions of behaviour, knowledge and skills expected for each role category. This sets the blueprint for identifying the skills and knowledges needed for the many different care roles. Flexible learning opportunities are key in addressing the skill shortages in the care sector, as many adults working in this sector face a multitude of barriers to participating in training.

In Australia, all continuous training programmes for LTC workers are sponsored by government's funding. In addition, following the Aged Care Workforce Strategy, the Aged Services Industry Reference Committee started an examination process to reform the national training package qualifications and skill sets needed for LTC, as well as new approaches to career structuring and progression in the sector. In 2023, the My Aged Care Learning Strategy 2023 was released. This strategy outlines the required capabilities and minimum training to access to the aged care system and adopts a blended approach to learning, including on-line training, on-the-job learning and evaluation by experienced workplace trainers and managers (Department of Health and Aged Care, 2023[41]).

In Austria, where a technical degree after high school is required for personal care workers and a Bachelor's degree is required for nurses working in LTC, training for LTC workers is fully covered by

governments and employers. Training can be provided during working time, and the ten weeks of education required to participate in the LTC workforce can be provided on-site, in schools or in universities (OECD, 2020[39]).

Germany has provided funds for education and redesign of degrees. School fees have been abolished in nursing education and a new legislation merged specialised nursing systems (general, geriatric and paediatric) allowing for more flexibility (Federal Ministry of Health, 2023[42]). Regarding specific measures for geriatric care, the education and training initiative for elderly care implemented between 2012 and 2015 extended options for shortening training when applicants have relevant knowledge and contributed to an increase in the number of trainees in geriatric care.

In Iceland, where no statutory minimum requirements exist for personal care workers, they can receive education or training specific to LTC. Courses take 2-3 months, part time alongside work. Short training is mostly covered by unions or employers, and workers are often allowed to take part of it within working time. For social care workers, formal LTC education usually takes 2 years; for nurse aides (for which a Bachelor's degree is required), it usually takes 3-4 years (OECD, 2020[39]).

In the Philippines, the Technical Education and Skills Development Authority (TESDA) has developed the Caregiving (Elderly) NC II programme which is designed to meet the growing demand for skilled caregivers, addressing the challenges posed by an ageing population.[10] The programme offers a structured and flexible pathway for individuals aspiring to enter the caregiving profession. The programme is part of TESDA's broader strategy to enhance the workforce by providing nationally recognised certifications and skills training aligned with global standards. The Caregiving (Elderly) NC II programme equips students with the competencies necessary to provide care and support for the elderly in a variety of contexts, including private care, hospitals, clinics and other healthcare facilities. The programme encompasses both theoretical instruction and hands-on training, ensuring that graduates can effectively apply their skills in real-world settings.

The Caregiving (Elderly) NC II programme, delivered through TESDA's accredited training centres across the Philippines, combines classroom-based instruction with supervised practical training to prepare individuals for professional caregiving roles. For those with prior caregiving experience, TESDA offers Recognition of Prior Learning (RPL), enabling candidates to have their skills assessed through practical demonstrations and interviews. This process allows them to gain certification without redundant training, saving time and resources. For individuals requiring additional training, TESDA provides modular learning options, ensuring they complete only the components necessary to complement their existing knowledge. Graduates of the programme receive the Caregiving (Elderly) NC II certificate, recognised both domestically and internationally, opening doors to employment in various settings, including private caregiving, hospitals, clinics, and residential care facilities. Beyond immediate employment, TESDA facilitates pathways for career progression, allowing certified caregivers to transition to related careers in healthcare or pursue advanced qualifications. In 2023, the programme recorded a total of 1 788 enrolments and 1 273 graduates, underscoring its critical role in addressing the growing demand for eldercare services amidst the country's rapidly ageing population.[11]

In response to its rapidly ageing population, Thailand has developed a Community-Based Long-Term Care (LTC) Programme, aimed at providing comprehensive care for elderly individuals who are homebound or bedridden (ADB, 2020[43]). Launched in 2016, the programme seeks to improve the quality of life for older adults by offering co-ordinated health and social services. Managed by local administrative organisations from the health and social services sectors, with support from the Ministry of Public Health, the programme establishes a framework for integrating care within the community. Central to the LTC programme are CHWs, who undergo 70 hours of training in areas such as chronic disease management, health promotion and mental health care to become community caregivers. Some CHWs are paid professionals, while others serve as volunteers. They visit elderly individuals in their homes, providing support for daily living activities,

medical care and rehabilitation services. Depending on the individual's needs, in-home care may range from two to eight hours per week.

In addition, the programme has established a new role for care managers, typically nurses or social workers, who play a key role in the initiative by assessing the health and social needs of elderly beneficiaries and co-ordinating care plans. These managers undergo 70 hours of training focussed on ageing, the rights of older people, the role of a care manager and basic care management practices. They work with both the families of the elderly and health and care professionals to ensure that care is personalised, effectively monitored. Care managers are also responsible to manage and monitor the performance of five to ten caregivers.

Funded through the Universal Coverage Scheme (UCS), Thailand's LTC programme represents a significant step in addressing the healthcare needs of its ageing population. By emphasising community-driven care and providing formalised training for caregivers, the programme not only supports elderly individuals in ageing at home but also offers a structured career path for those aspiring to enter the caregiving profession. By 2018, the programme had expanded to cover 5 639 out of 7 776 subdistricts, aiming to serve 193 000 people. As Thailand continues to expand and refine the programme, it may serve as a model for other Southeast Asian countries facing similar demographic shifts.

Similarly to long-term care, community health workers often face large levels of informality in the labour market yet could play an important role in addressing workforce shortages. Zimbabwe faces a persistent human resource for health (HRH) crisis marked by shortages, maldistribution, and attrition of health professionals. The challenges are driven by migration of doctors and nurses, poor remuneration, inadequate supervision, and disparities between rural and urban postings, which collectively undermine the country's ability to deliver equitable services (ReBUILD Consortium, 2015[44]). Despite the launch of the Health Workforce Strategy 2023-2030, which aims to scale up annual training outputs to 7 000, create 32 000 new positions, and integrate community health workers (CHWs) into the system, Zimbabwe continues to grapple with significant gaps (WHO Africa, 2024[45]). Within this constrained context, informal providers such as Village Health Workers (VHWs) or CHWs play an indispensable role in sustaining primary healthcare delivery. Established in the 1980s, the VHW programme provided community-level services in health promotion, prevention, minor treatment, and surveillance, particularly in underserved rural areas (CHW Central, 2018[46]). However, these workers often lack consistent remuneration, standardised training, and adequate supervision, leaving their contributions under-recognised and vulnerable to systemic neglect (Munyai, Mudau and Mashau, 2025[47]).

The reliance on informal providers reflects broader structural weaknesses, where up to 60% of Zimbabwe's workforce operates informally, acquiring skills outside regulated systems (Medina, Jonelis and Cangul, 2017[48]). In health, this results in large numbers of providers working without clear credentialing, regulated scopes of practice, or pathways for professional advancement, and potentially without the competence to do the job. While VHWs and CHWs are integral to bridging service gaps, they remain outside the authority of professional councils that license and regulate doctors, nurses, and allied professionals (ReBUILD Consortium, 2015[44]). Recently, the government signalled a shift by announcing the absorption of 22 000 CHWs into the civil service by the end of 2025, with a longer-term goal of doubling their numbers to 40 000 by 2030 (Frontline Media, 2025[49]). This represents a move toward formal recognition, yet the absence of flexible credentialing mechanisms limits opportunities for informal providers to transition into more advanced roles, such as health assistants or technicians.

Creating flexible pathways for informal providers could significantly strengthen Zimbabwe's health workforce. Modular training and bridging courses that acknowledge prior informal experience would allow VHWs to acquire credentials and progress into semi-formal or formal cadres. Standardised curricula, supervision, and regulation would improve the quality and safety of care, while official recognition and remuneration would enhance motivation and retention. Such pathways would also deliver cost-efficient expansion of service coverage, particularly in rural areas where physician shortages are acute. However,

these reforms require regulatory innovation, investment in training infrastructure, and integration into broader HRH planning to avoid perpetuating a two-tier system. Zimbabwe could move closer to achieving universal health coverage while simultaneously addressing its HRH crisis by formalising and professionalising the role of VHWs and other informal providers.

The formalisation of previously informal healthcare provision is enabling workers in Tanzania to enter formal health professions. The Accredited Drug Dispensing Outlets (ADDOs) represent an innovative yet hybrid approach to strengthening Tanzania's pharmaceutical workforce. Although considered informal, ADDOs operate under a semi-formal framework, as dispensers receive structured training and certification before being licensed to operate. They were first introduced to expand access to essential medicines through community pharmacies known as Duka la Dawa Muhimu (DLDM), with a particular focus on underserved rural and peri-urban populations (Rutta et al., 2009[50]; Pharmacy Council, 2015[51]).

Over time, ADDOs have evolved into a flexible pathway into formal health professions, enabling thousands of individuals – many of whom would not otherwise enter the health sector – to contribute to service delivery. To date, Tanzania has established more than 9 000 accredited medicine outlets staffed by over 19 000 trained dispensers, significantly increasing coverage of pharmaceutical services across the country (Pharmacy Council, 2015[51]). Their contribution has been notable in areas such as antimicrobial stewardship, where ADDOs have played a role in guiding appropriate medicine use and expanding health literacy (Rutta et al., 2009[50]). However, sustainability challenges remain. Ensuring consistent quality assurance, regulatory oversight, and professional standards has proven difficult given the scale and diversity of ADDOs. Variations in adherence to dispensing guidelines, limited supervision, and the commercial pressures faced by operators can compromise service quality. Long-term sustainability therefore depends on stronger regulatory mechanisms, ongoing professional development for dispensers, and better integration of ADDOs into the formal health system (Pharmacy Council, 2015[51]) and institutionalisation through existing training frameworks including the Technical and Vocational Education and Training Institutions.

In summary, while ADDOs have demonstrated how non-traditional pathways can expand healthcare access and serve as stepping-stones into formal professions, their sustainability hinges on balancing access, quality, and regulation within Tanzania's broader health system.

Recognition of prior learning

In the context of adult learning, recognition of prior learning (RPL) has emerged as a vital policy tool in enabling better skill matching between workers and jobs, and facilitating upskilling and reskilling. RPL is a process by which candidates have their prior learning and experiences identified, assessed, documented and certified as education and training credentials. RPL can be used to validate both practical and theoretical skills, and it is the bridge that enables non-formal and informal learning to be formalised. This validation of acquired skills and competencies opens up work and training opportunities to those that possess the skills without having undergone formal education. As such, RPL is a policy tool that increases the employability of citizens, often faster and (potentially) at a lower cost than formal education. It can also help address labour and skill shortages by reducing training time.

RPL systems are diverse, and this section describes examples from different countries. Each system is unique to some extent in the way it assesses candidates, what type of support is offered and what are the final outcomes of the process. However, all RPL programmes must be built on RPL standards, which are reference points for skills and knowledges for which a candidate is assessed against. As a minimum, RPL standards need to identify the qualification, occupation, block of competencies or individual competency that is required for a job. The competencies and knowledge need to be linked to related learning outcomes or tasks, which are practical descriptions incorporated in the assessment method. Ideally, the standards will be linked to the national qualification framework or occupation standard, so that employers easily able

to understand the certificate issued through the RPL process. Assessment methods can either be the same for all candidates or adjusted to the candidate's needs and experiences.[12]

RPL has the potential to provides an entry pathway to formal employment in the healthcare sector for LTC workers employed informally and for community health workers who provide personal care and administer medication or perform medical acts in households. Numerous informal care workers possess the necessary skills to carry out healthcare tasks, yet do not have the formal qualifications required to carry out the same tasks under a formal work contract. Community health workers play a vital role in primary healthcare, often acting as frontline providers for underserved, marginalised, and hard-to-reach populations. Despite their contributions to delivering accessible, affordable, and people-centred care, their roles are often loosely defined, inconsistently compensated, and poorly integrated into formal health systems (Mignote et al., 2023[52]). Recognition of prior learning becomes a central component in making visible the skills and competencies and enabling formalisation and work mobility of LTC carers and community health workers.

Still, the use of RPL in the healthcare sector has its limitations. Many health and care professions are highly regulated and remain subject to strict licensing standards with rigorous academic assessments a necessary pre-requisite to enter the occupation. Such is often the case of physicians and nurses, who must undergo substantial education programmes to obtain the necessary licence to practice within their field. For these occupations, recognition of prior learning could only play a very minor role in validating smaller training modules and slightly shortening the duration of the education programme.

For lower-level entry jobs within the health and care sector such as community health workers and healthcare assistants, RPL can be a deciding factor in motivating an adult to take-up a formal job. Embarking on a comprehensive qualification can be a daunting task for adults who have not undertaken any formal training in a long time, and lack of time is cited as the biggest barrier to training among adults (OECD, 2020[53]). RPL has often an individual-centric starting point, where the process focusses on what the individual needs to enter the occupation, rather than what a one-size-fits all training programme. By focussing on the individual's prior experience, the length of an education programme can be reduced through the certification of training modules or the qualification itself.

In the Philippines, the NCII programmes for both for the Barangay Health Services (community healthcare workers) and Caregivers (long-term care workers) include RPL processes, so that candidates who have gained competencies through means other than formal training programmes, such as through education, informal training, previous work, or life experiences, may apply for recognition for a particular qualification. RPL includes a competency assessment process that confirms whether the individual can perform to the standards expected at the workplace as expressed in the relevant competency standards.

Similarly, in Japan, the Career Level Classification System for Long-term Care Professionals aims to make care professions more attractive by increasing he transparency of career paths and enable RPL in the workplace (Elderly Service Providers Association, 2025[54]). Developed by a private organisation, the Elderly Service Providers Association, under the initiative of the Cabinet Office of the Japanese Government, the system was introduced in 2012 to address high turnover rates in the care sector, as many workers felt their skills were not adequately recognised or reflected in their wages. The system maps the skill requirements in care occupations from Level 1 (entry level) to Level 7 (mastery) for both theoretical knowledge and practical skills. The knowledge components of the assessment system employ the official certification system for long-term care workers, meaning candidates have to pass existing examinations. However, the practical skill assessment is the core feature of this system. Assessors – coworkers trained and qualified by the Elderly Service Providers Association – observe applicants' daily work and evaluate their skills on a scale from Level 1 to Level 4, with Level 4 indicating leadership capabilities in the workplace. The grading system consists of evaluation criteria for practical skills have the structure of three large units, subdivided by 13 medium units, 41 small items and 148 individual points to be assessed totally. The units and points to be assessed vary on which level is being graded (Study team,

2021[55]). This enables workers to be hired as support staff and gain qualifications as they acquire skills on the job and through training, and obtain qualification with the support of their employer.

Some countries, such as South Africa, are attempting to implement RPL for a range of roles in the healthcare sector, not only for low-skill occupations (Box 2.2). Implementing a sector-wide RPL system requires comprehensive policy design to address both the range of skills acquired informally or non-formally, as well as the different skills and training requirements of different health and care occupations.

Box 2.2. Recognition of prior learning in South Africa

South Africa's RPL system is anchored in the National Qualifications Framework (NQF) Act No. 67 of 2008, together with associated legislation including the National Policy for Implementation of the Recognition of Prior Learning, created by the South African Qualifications Authority (SAQA, 2014[56]). In South Africa, RPL allows recognition of learning (formal, informal, non-formal) gained outside conventional academic settings (through work experience, community service, mentorship, etc.), measured against learning outcomes required for qualifications, professional registration, or licensure (SAQA, 2002[57]; 2014[56]).

There are three avenues through which South Africa's RPL framework facilitates flexible career pathways for healthcare professionals. First, *access to health profession education*. For health professions such as nursing, RPL has been integrated into the South African Nursing Council (SANC) policy to enable people who have relevant work experience or informal training to enter formal nursing qualifications or receive credits towards specialised training (South African Nursing Council, 2009[58]). This lowers barriers for candidates who may not meet traditional academic entry requirements but have amassed relevant competence through experience. Second, *accelerated registration or licensing.* The RPL process can allow practitioners to have parts of their skills, knowledge, and experience formally acknowledged so that they may bypass some formal training modules or fulfil registration requirements more quickly, assuming their competencies meet required standards. While detailed published examples for medical doctors (through the Health Professions Council of South Africa, HPCSA) are less immediately visible, the policy environment under SAQA mandates that professional bodies must have RPL policies if they seek recognition of professional designation (South African Career Development Association, 2022[59]). Third and final, *formalisation of previously informal work*. Many health and care workers who have acquired skills through service, mentorship, or informal settings may not have formal credentials. With RPL, such workers can gain recognition for these skills, receive credits, or undergo competency assessment, thereby becoming formally recognised and eligible for licensure, better employment opportunities, and progression. Nursing is a concrete example: work experience and informal learning are accepted by SANC under RPL to allow for credentialing and specialised training (South African Nursing Council, 2009[58]).

The benefits of South Africa's RPL framework is twofold. First, *redress & equity.* RPL is explicitly used to correct past inequities – racial, educational, socio-economic – that excluded people from formal education and professions. It allows learners from disadvantaged backgrounds to formalise their competence (SAQA, 2014[56]). Second, improves mobility & progression. RPL enhances the ability of professionals to move across roles, elevate higher qualifications, or enter into specialised fields without repeating redundant education by allowing credits for prior learning (SAQA, 2014[60]). Nursing applicants who have non-formal or informal experience can use RPL to access nursing training programmes, or to gain credit toward certain modules, enhancing professionalisation of nurses with experiential learning backgrounds (South African Nursing Council, 2009[58]). Likewise, RPL is embedded in national frameworks like the NQF, which ensures that all Quality Councils (including those that cover health professions) are required to accept and implement RPL (SAQA, 2014[56]).

Despite the benefits, the RPL framework faces several challenges and limitations. First, there are varied implementations across professions. While bodies like SANC have clear RPL guidelines for nursing, other professional boards do not always have as explicit procedures, especially for professions such as medicine, where regulatory, safety, and quality considerations are more tightly controlled. Despite pilot initiatives aimed at community health workers, these remain with a provincial scope and do not yet make part of a national RPL system for all CHWs and informal caregivers. Second, there are notable challenges with quality assurance and assessment. Assessing prior learning rigorously, ensuring fairness, consistency, and alignment with national qualification standards requires well-trained assessors, appropriate instruments, and moderation. Some institutions struggle with capacity, funding, and administrative complexity. Third and final, there are challenges with recognition in licensing and scope of practice. Even when formal learning is recognised, there may still be restrictions from regulatory councils about what practice candidates can perform without full formal qualification or supervised practice.

The South African experience with RPL highlights several lessons that can inform other African contexts. First, a nationally legislated framework, such as the SAQA Act and the NQF, is critical to ensure legitimacy, consistency, and co-ordination across professions. Second, professional councils must develop clear guidelines – as seen with the SANC – to translate national policy into practical pathways for licensing and registration. Third, robust quality assurance systems are needed, including standardised assessment tools, well-trained assessors, and effective credit-transfer mechanisms, to maintain credibility and fairness. Finally, transparency in recognising prior experiences, whether from formal work, informal practice, or mentorship, helps applicants prepare adequately and builds trust in the system. Collectively, these elements enable RPL to expand access, formalise skills, and strengthen professional mobility within the health sector.

Across the OECD, seven countries have taken initiatives in recognising previous work experience in long-term care by awarding course credits in education programmes (OECD, 2023[61]). In Denmark, an assessment of individual competences is available to all participants in the training programme, where they can get certification for an entire AMU training programme or individual modules. The assessment comprises a conversation with a VET teacher and a written and/or practical assessment. The validation process can take between half and five days and is free for employed adults and through unemployment programmes by the public employment service. The assessment of individual competencies plays an important role in the flexibility of the training programmes, as the RPL certificate can be used to not only validate entire modules within the training programmes, but it can also be used to shorten the training duration of certain modules if the candidate is found to have prior experience in some of the learning outcomes. The AMU RPL certificates are recognised both in the wider education system and by employers, and the RPL certificate can be used to shorten training durations of further education, such as higher VET qualifications not in the AMU system, as well as a certificate of skills when applying for jobs in the healthcare sector.[13]

Although RPL can be used to validate candidates' practical skills and theoretical knowledge, in the specific case of healthcare programmes, validation of practical skills tends to be more common. For example, in Norway, any adult that has minimum five years of working experience in the healthcare sector without a healthcare-related qualification can get certified as a healthcare professional (helsefagarbeider) if they pass a five-hour theoretical exam. The years of working experience can be validated as the practical component of the training programme through documentation of work experience, tasks and responsibilities. Requirements for length of work experience can be reduced if the candidate has undertaken relevant modules on a secondary school level. If needed, the candidate can attend classes at an adult education institution to prepare for the written exam, and the classes range from one semester to two years depending on the desired intensity of training. The classes are often offered both in-person and online to make it more accessible for adults who have time constraints due to work or family responsibilities.

Upon passing the exam, the worker gets access to higher-paying jobs in the healthcare sector. Though the RPL pathway is available for all occupations that require a vocational certificate in Norway, participation in the programme is highest in the health and youth development sector, with 38% of all RPL candidates in 2018 achieving a vocational certificate in this sector (NOU, 2018[62]).

Quality engagement with low- or medium-skilled worker entering the healthcare sector for the first time is important for the success of the validation process and further training. For this reason, RPL systems are more effective and efficient when combined with training programmes and quality career *guidance*, and when there is a clear career pathway for the candidate after they obtain the certificate (OECD, 2023[63]). To facilitate such an experience, RPL systems need to feature different actors that interact with the candidate to instil in them a confidence in their own abilities, and the belief in the positive labour-market outcomes post-assessment. Experts can be actors such as career guidance advisors, labour-market/occupational experts, and employers. In New Zealand, Careerforce is a multi-dimensional programme that features a wide array of services in the field of training and recognition of skills to enable formalisation and upskilling pathways to those already working in the health and care sectors. Through the Careerforce programme employers get access to support and material to carry out on-the-job assessments, while trainees have available guidance advisors and workplace mentors to help them showcase the skills they already possess through the RPL process. Careerforce targets both the formalisation and certification of uncertified/generalist workers in the health and care sector, and the upskilling of workers that already possess entry-level qualification but want to progress in their careers (Box 2.3).

Box 2.3. Supporting those employed in the healthcare sector in obtaining recognised healthcare qualifications

The case of Careerforce in New Zealand

Careerforce New Zealand is an industry training organisation (ITO)[1] that supports employers in implementing industry training in the sectors of aged care, disability support, healthcare, home and community support, and mental health and addiction support.

Careerforce offers a range of services for both employers and trainees to enable the assessment of existing skills and upskilling opportunities. For employers, the programme can be used as a tool to upskill staff, increase the quality of service and invest in staff retention. Careerforce help employers set up and run efficient and effective skill assessments and training programmes with the support of a Careerforce Workplace Advisor and occupation-specific learning and assessment resources (which can be paper-based or online depending on the trainee's preferences).

Trainees enrol in an assessment and training programme to achieve a nationally recognised qualification while working. The trainee carries out existing and new work tasks under the guidance of Observers who know the correct standard of performance expected in the workplace. Observers are people working alongside trainees, who are able to capture and attest to their skills and competencies. The final assessment is carried out by an Assessor who observes the trainee in the workplace in a practical assessment (and a short-written examination) and are able to capture and attest to the trainee's skills and competences, as well as provide mentoring.

Qualifications are available on a secondary school level (New Zealand Qualifications Framework Level 2-4) and sub-degree vocational certificates and diplomas (New Zealand Qualifications Framework Level 5-6).

1. Industry training, also known as on-the-job training, workplace training or earn and learn pathways, is available for people already in employment who are looking to keep their knowledge and skills up-to-date and advance their careers.

Source: Careerforce programme website, https://www.careerforce.org.nz/, (accessed 17 June 2024).

The recognition of previous learning and experience is not limited to individual-level assessments. It can also be used as a more structural tool to strengthen training programmes and enable career transitions between certain complementary but distinct occupational groups (see Box 2.4, which presents two examples of transitions between the armed forces and the healthcare sector). Applying such structural approaches to mapping acquired skills and experiences of distinct population groups against the learning outcomes of healthcare qualifications is one of the most effective tools in enabling mid-career transitions to the health and care workforce. It creates a pipeline of people with similar backgrounds and experiences to transition to the health and care workforce and share the story of their success with their peers – an important motivating factor in career transitions.

Box 2.4. Facilitating career transitions between complementary occupational groups through the recognition of prior learning

Armed Forces into Allied Health programme in the United Kingdom

In the United Kingdom, "Armed Forces Personnel" has been identified as an occupational group that share key skills and competencies with "Allied Health Professionals", but where the educational and career pathways are not as straightforward due to an insufficient system for recognition of prior learning between these two sectors. The Armed Forces into Allied Health Report, funded by NHS England, identifies obstacles in the RPL system that hinder career transitions from the Armed Forces to a career in the NHS.

The study finds that RPL practices do not adequately recognise the skills and competencies of Armed Force Personnel for entry into health-related higher education programmes. Despite possessing most, if not all, the necessary skills to enter a medical-related higher education programme, many former Armed Forces Personnel have had to undertake year-long preparatory courses in order to enrol in health-related qualification programmes due to insufficient recognition of the training undertaken during their time in the Armed Forces. The study recommends including two 15-credit modules in the Armed Forces curriculum – Anatomy & Physiology and Working in the NHS – which are tailored training courses to bridge the gaps identified by shortcoming in the RPL system.

Emergency Medical Technician partnership between U.S. Army and Midlands Technical College

In the United States, the army-to-healthcare pathway has also been recognised. The Unites States Army has partnered up with the Midlands Technical College (located close to the Fort Jackson military base) to recognise the skills of soldiers that are appropriate for careers in the healthcare sector. After an extensive mapping of the skills soldiers learn through military training with the learning outcomes of certain healthcare training programmes, colleges are now able to offer short training programmes for entry to the healthcare workforce. Midlands Technical College now offers a five-week intensive course for soldiers on topics such as airway respiration and ventilation, cardiology, and resuscitation, Emergency Medical Services operations and trauma. Once the soldiers have completed this voluntary course, as well as certain mandatory courses that are part of the military training, they are qualified to take the National Registry EMT exam, which opens doors to multiple job opportunities in the healthcare sector, including emergency dispatcher, medic, emergency room technician, and registered emergency medical technician worker. Similar programmes are available for veterans in other U.S. states.

Source: NHS Health Education England (2023), *Armed Forces into Allied Health (AFIAH) Report*: https://www.hee.nhs.uk/our-work/allied-health-professions/helping-ensure-essential-supply-ahps/making-step-health-case-studies; U.S. ARMY (2022) Soldiers attend special EMT training, https://www.army.mil/article/257213/soldiers_attend_special_emt_training.

Career guidance

Career guidance can help to reduce shortages in the healthcare sector in two ways: by enabling career transitions into the healthcare sector (jobseekers or those previously employed in other sectors); and by increasing the retention of workers already engaged in the healthcare sector by supporting career progression. Career guidance encompasses a range of services designed to support individuals in making well-informed decisions about their education, training and career paths. It fulfils several functions:

- Provide essential information about education programmes, training options and employment opportunities, and ensure this information is easy to access and understand.
- Help individuals assess their skills, offering personalised advice to make strategic decisions about their career development and lifelong learning.
- Support jobseekers in the development of job-search and networking skills, orient them towards job opportunities tailored to their skills and interests and to job placement programmes.
- Dispel misinformation and false assumptions about the structure of the health and care workforce, such as hierarchy of importance.

As healthcare continues to evolve with new technologies, specialities, and training pathways, career guidance ensures that individuals can navigate these complexities and identify opportunities aligned with their skills and aspirations. By offering personalised advice, career guidance helps bridge the gap between the available workforce and the needs of the healthcare sector, ensuring that individuals understand the qualifications required, the potential for upskilling, and the roles they can pursue within the field. It can help jobseekers understand the landscape of entry-level occupations and their training requirements, help those working informally to validate their experience and move into formal work, or assist workers already in the health and care workforce to keep their skills up to date or advance professionally. Ultimately, not only does career guidance support the professional development of individuals but also contributes to the sustainability of the healthcare sector.

In Canada, the Career Transition Program is a government and provincially-backed initiative designed to assist mid-career transitions to enter high-demand sectors such as healthcare. The programme offers career counselling, training support, and financial assistance to help people transition into new roles. One example of this is the British Columbia Health Career Access Program which offers a pathway for individuals to start as healthcare support workers while receiving on-the-job training and later transitioning into full healthcare assistant roles.[14] Candidates can apply to become a Healthcare Support Worker or a Healthcare Assistant. Candidates apply to the Healthcare Access Program by applying/expressing their interest to one of the two positions. If the candidate receives and accepts an offer of employment, the work and training can begin. The candidate completes an orientation and onboarding programme and can begin working in the healthcare support/assistant position and will receive employer-provided training throughout the placement. Once the work placement is completed, the candidate begins a full-time education programme at a post-secondary institution, lasting approximately one year. The candidate receives their post-secondary qualification upon successful completion and can register as a healthcare assistant. Career and training guidance, and financial support, is provided throughout the process.

Connecting people with the right services is crucial and career guidance programmes play a role in this process. For those who have already some labour-market experiences in the healthcare sector, career guidance can be a good tool to map their experience, skills and competences, as well as their career aspirations. Through this process, candidates are put in contact with training providers and other career services (for example, adults who might already be working in a health or care capacity but without a formal qualification are encouraged to partake in up-skilling opportunities and formalise their skills by obtaining a labour-market relevant certificate). Individuals with low education qualifications are less willing to pursue learning opportunities because they lack awareness of the direct and indirect benefits of learning: as a result many fail to recognise their own learning needs and hence do not seek training opportunities (OECD,

2021[64]). Without appropriate intervention, less-educated health and care workers are at risk of getting caught in a "low skill trap", being employed in low-quality jobs with weak career prospects and few opportunities and incentives to engage in learning. In the New Zealand Careerforce programme (Box 2.3), guidance and mentoring are important to help candidates complete the assessment and training, and mentors are chosen so that they match the candidate well in experience (e.g. working for the same healthcare provider) and can help them increase their confidence throughout the process. Career guidance advisors are specialised in the sector and can help the candidate browse the wealth of information and opportunities of different career pathways.

In the healthcare sector, career pathways can be difficult to understand, as healthcare involves many different specialities and professions working together, with (very) different training requirements. Individuals who want to enter the health and care workforce might be overwhelmed with information, trying to understand the difference in training requirements (for example, between an entry-level position as an assistant in an elderly care facility and a similarly named position in a dental hygiene clinic), or figuring out the difference in tasks and responsibilities (for example, between a rehabilitation specialist and nurse in post-op rehabilitation care). Making available comprehensive and user-friendly information about career pathways is extremely useful for workers and jobseekers. Guidance and information about career pathways can be delivered under the form of face-to-face interviews or can be distributed and managed through online interfaces.

Before, or instead of, seeking advice from a career guidance advisor, 69% of adults look independently online for information on employment, education and training opportunities (OECD, 2021[65]). Although this form of career guidance and advice requires autonomy and initiative for the users, it is generally based on sound and up-to-date information on labour market needs. Oftentimes, national healthcare providers and government bodies are best equipped to identify their labour and skills needs and map out career and training pathways within the public system. For instance, in the United Kingdom, the NHS has developed an extensive online platform (the NHS Health careers portal) to manage healthcare careers and find opportunities, training, pathways and support to transition to a job in health.[15] The site features up-to-date occupational profiles, training requirements, information about both comprehensive training programmes and modular courses, and opportunities for recognition of prior learning. Individuals can create profiles on the website and manage their own career pathway, which includes both new entries into the health and care workforce and career mobility within the sector. If needed, they can get in touch with the service for digital one-on-one guidance with a guidance advisor.

In the United Kingdom, Skills for Health (a sector skills council) provides career guidance through its "Careers Information, Advice, and Guidance" service. This service offers information on health and care roles, entry requirements, and career progression pathways. The guidance is specifically designed to help individuals understand the different entry-level roles, such as healthcare assistants or nursing associates, and the qualifications required to move into these positions. Skills England's occupational map (previously the Skills for Health's Healthcare Apprenticeship Pathways Tool) lets users view different career routes.[16] Career pathways are grouped by sub-sectors (e.g. Allied Health Professionals) and healthcare topics (e.g. Prosthetist and Orthotist) and pathways are mapped from entry-level occupations (e.g. Healthcare Support Worker (level 2)) to the highest-level occupation within that sub-sector/topic (e.g. Advanced Clinical Practitioner (level 7)). Each occupation on the career pathway has information about training, assessments and standards, and users can search for training providers and apprenticeship opportunities for all occupations in the pathway.

To tackle workforce shortages in the healthcare sector, providers will need to recruit from a diverse pool of workers. Attracting non-traditional applicants to the healthcare sector is a strategy that can help fill critical labour gaps, especially by engaging individuals from underrepresented groups, career changers, veterans, and those returning to the workforce. This approach not only diversifies the workforce but also ensures that a broad range of skills, experiences and perspectives are brought into healthcare, improving the quality of care and meeting growing patient demands.

Career guidance plays a pivotal role in encouraging underrepresented groups to enter the healthcare sector. Many low- and medium-skill occupations in the healthcare sector are dominated by women, particularly in areas such as nursing, primary care, long-term care and mental health. In most countries, these occupations also face significant workforce shortages. Encouraging more men to take-up entry-level health and care jobs can help fill these gaps. In addition to filling shortages in the health and care workforce, a more gender-balanced workforce would have other advantages: promoting diverse perspectives, addressing gender-specific health needs, and challenging gender stereotypes. To attract men, targeted career guidance strategies can be implemented to reshape perceptions, provide clear pathways, and highlight the diverse opportunities in healthcare.

However, breaking stigma and informational barriers to men's entry in female-dominated jobs is not easy. In addition to general policies such as quotas, gender-based scholarships and financial incentives, guidance and awareness policies that actively encourage men to take up jobs in the healthcare sector should be developed. Programmes such as Step into Health (United Kingdom) are contributing to the diversification of the healthcare sector by offering guidance and support to workers transitioning from a male-dominated industry (the Armed Forces) to the healthcare sector, including nursing and allied health professionals (see Box 2.4). The Norwegian Government has actively been pursuing this goal with the Men in Health (Menn i Helse), a programme which utilises career guidance, recognition of prior learning and work-based learning to transition unemployed men into entry-level health and care roles (Box 2.5).

Box 2.5. Men in Health programme in Norway

The Men in Health (Menn i Helse) programme is a public programme for men to obtain experience and certificates to work in the healthcare sector. The programme is available for all unemployed men aged 25-55+ who are registered with the public employment services. Relevant candidates can contact the programme independently or be referred by the public employment service. Once enrolled in the programme, the candidate meets a career guidance advisor that will follow them through the entire programme, assisting with various challenges or issues the candidate might have.

The programme is initiated with a session with a career guidance advisor to map out the candidate's experience and interest to best match them with a sub-sector within the healthcare sector. Then the candidate undertakes a practical 3-month work placement to see if they are interested in pursuing a training programme and career within that sub-field. The career guidance advisor and a workplace mentor are in charge of mapping out the candidate's skillsets and interests. Once the work placement is completed and the existing skills and experience are identified and validated, the candidate can start their (shortened) training programme to a vocational certificate as a health worker (can be shortened to a one-year training programme and one year work placement). The training programme combines on-the-job learning and theory-based classroom teaching conducted at secondary schools of adult education institutions. The vocational certificate is issued upon the successful completion of a final exam.

The candidate receives financial support from both the public employment service and a salary from the employer (municipality). Upon successful completion of the programme more than 9 out of 10 candidates are employed within their first year. Programme evaluations show that the close guidance the candidates receive is an important part in building their self-confidence to complete the training programme and final examination, as many candidates had never considered health and care jobs in female-dominated occupations, particularly home care, rehabilitation and treatment centres, and with children with special needs.

The Norwegian Government considers the Men in Health programme to be one of the most successful initiatives for the recruitment of men into the care sector (Ministry of Health and Care Services, 2023[66]).

Source: Confederation of Municipalities in Norway (2024), Men in Health project website, https://mennihelse.no/ (accessed 27 September 2024).

Regional initiatives to address shortages

Regional and local initiatives to address shortages are emerging in many countries, as rural areas face significant problems in attracting health and care professionals. This situation causes high inequalities in the access to healthcare between individuals living in urban areas and those who live in areas with a low population density. Of great concern is the difficulty of primary care centres in rural areas in recruiting and retaining general practitioners as well as the lack of nurses and dentists, ophthalmologists and other specialists in these rural areas. The concentration of medical and nursing schools in urban areas further widens this disparity, leaving rural communities underserved and worsening health inequalities, particularly in South-East Asia (Rao and Schmidt, 2023[67]).

This is a global phenomenon with multiple (global and local) causes. In 2010, with the aim of providing evidence-based global recommendations to address the rural workforce crisis, the World Health Organization recommended a global policy to "increase access to health workers in remote and rural areas by improving retention". The recommendation included educational approaches, regulation, financial incentives and personal and professional support (WHO, 2010[68]). Studies about the social determinants of workforce retention in rural areas identify several factors that determine retention: rural familiarity and/or interest of workers, social connection and place integration, community participation and satisfaction, and fulfilment of life aspirations (Cosgrave, Malatzky and Gillespie, 2019[69]).

Many countries have implemented educational interventions for recruiting and retaining health professionals in medical deserts. This varies from opening new (rural) medical schools to offering rural programmes, rotations or internships to medical students (Bes et al., 2023[70]; Noya et al., 2021[71]). Although most of these interventions were targeted on generalist doctors (and not in low skilled staff), it is interesting to mention a pilot project entitled AGnES (Arztentlastende gemeindenahe E-Health-gestützte Systemische Intervention, i.e. a community-based, e-health-assisted, systemic intervention to reduce physicians' workloads), conducted in three regions of the German state of Western-Pomerania. The intervention consisted in delegating some medical tasks to physicians' assistants. A survey was conducted to assess the attitude of Primary Care Physicians (PCP) toward the delegation of home visit tasks, and to determine what they would prefer as the job description and type of employment contract for a health assistant who would be hired to assist them. Results showed that rural and individual PCP were 1.6-1.9 times more likely to delegate tasks to their assistants compared to urban and group PCP. As a result, the delegating PCP spent significantly less of their time on running their general practice. Interestingly most PCP were in favour of delegating home visits to qualified assistants (77%) highlighting the need of well-trained non-specialised staff.

Many countries leverage volunteer work and NGOs to address healthcare coverage gaps in rural areas. For example, in Bangladesh the Urban Primary Healthcare Project contracts NGOs to provide primary care services in disadvantaged areas and in Sri Lanka, the Anti-Malaria Campaign leverages NGO capacity for diagnostic and surveillance support. However, it is important for governments to maintain leadership to ensure that NGO efforts align with public health objectives, address potential conflicts of interest, protect workers' rights, ensure quality health service provision and foster trust for long-term partnerships. Another approach to palliate health workforce shortages in rural and remote areas is task sharing. In the area of mental health, Hoeft et al. (2017[72]) conducted a systematic review on task sharing of mental health care in rural areas of high-income countries. The review identified approaches to task sharing that focussed mainly on community health workers (CHW) and primary care providers. Technology was also identified as a way of using mental health professionals to support care across settings, both within primary care and in the community. The review also highlighted how provider training, supervision and partnerships with local communities can support task sharing. Interesting examples include:

- Home visitation from a nurse and CHW for pregnant women on Medicaid in the United States to address stress and mental health (in this example the nurse shares part of her/his responsibilities

with the CHW, CHW were trained). The CHWs add to the nurse home visit programme by offering peer support to address chronic stressors, increase access to resources, improve health behaviours, and help engage women in services. Reported outcomes show an increase in the total number of pregnant women receiving service and care and an increase in the number of pregnant women at risk reached by the intervention (Roman et al., 2007[73]).

- Waitzkin et al. (2010[74]) assessed the role of "promotoras" (trained CHW) in depression care at community health centres. After a structured training program, primary care practitioners and promotoras collaboratively followed a clinical algorithm in which primary care practitioners prescribed medications and/or arranged consultations by mental health professionals and promotoras addressed the contextual sources of depression. The study found no difference (negative or positive) in patient's health outcomes, however the intervention was positively received by healthcare staff and contributed to freeing resources among primary care practitioners.

3 Evaluating the impact of flexible training pathways on healthcare provision

Beyond the evaluation of single initiatives implementing flexible pathways to boost the health and care workforce supply, it is important to assess whether new, modular, flexible pathways initiatives targeting entry level jobs have the potential to address health and care workforce shortages.

As mentioned above, flexible training policies for low-skilled workers in the health sector aim to address workforce shortages in entry-level health and care professions. In addition, they can alleviate shortages in higher-skilled health and care jobs indirectly by freeing up their time and allowing them to concentrate on higher level tasks. On the one hand, this approach, also known as task sharing (Fulton et al., 2011[75]), can potentially improve healthcare delivery efficiency, as well as and worker's employability. On the other hand, allowing individuals who have not acquired qualifications through traditional pathways to enter the healthcare system may raise concerns about potential negative impacts on the quality of care.

The impact of facilitated entry pathways on the overall healthcare system can be analysed according to several criteria:

- improvement of healthcare delivery;
- potential quality or safety concerns for patients, resistance among health and care professionals; and
- from a more global perspective, reduction of health and care workforce shortages.

This section provides examples of direct and indirect assessment of training on health outcomes and the reduction of health and care workforce shortages. However, evaluations of impact of flexible entry pathways remain limited.

Task-shifting has positive impact on healthcare quality when lower-skilled professionals are adequately trained

In the area of health prevention, frequent skills-mix changes have been introduced among nurses, community health workers and pharmacists. Several studies (California Health Workforce Alliance, 2013[76]; Hartzler et al., 2018[77]; Maier, Aiken and Busse, 2017[78]), show that in many countries, nurses and community health workers have expanded their role in prevention. Often, the reasons for implementing skills-mix changes are triggered by provision shortages, by the increasing incidence of chronic diseases and by the need for tailored services in hard-to-reach populations.

In this context, Maier et al. (2023[79]) conduct a study to evaluate the impact of task shifting on health promotion and prevention. Results show that community health workers can help increase the take-up of cancer screenings; and, for skin cancer screenings, adequately trained Nurse Practitioners demonstrated

sensitivity levels equal to dermatologists with skin cancer expertise and higher than general dermatologists in identifying malignant lesions.

Leong et al. (2021[80]) provide a comprehensive overview of task shifting from physicians to allied health and care workers in primary care and its impact on clinical outcomes. Although not limited to entry-level positions, authors identify key elements for successful implementation of task shifting, including training, supportive organisation systems, collaboration among all parties, a system for co-ordinated care, and adequate financing. Several reviewed studies suggest that shifting responsibilities improve or do not decrease the quality of care provided lower-skilled or less specialised professionals are adequately trained. Finally, Anthony et al. (2019[81]) show that role substitution by community health practitioners in remote communities was feasible with equivalent care delivered to that provided by general practitioners and was cost-saving.

Little evidence exists about the overall impact of flexible training pathways on reducing health and care workforce shortages

Addressing workforce shortages in the healthcare sector is a critical challenge globally. Various strategies, including vocational training, task shifting, and innovative educational partnerships, have been explored to mitigate these shortages and improve healthcare delivery. However, evaluations of the overall impact of these kind of policies are rare. In fact, it is complex to disentangle their effects from other factors that can also have a strong impact on the health provision (economic, demographic, public health policies, etc.); and because, often, sources of information on the final outcomes of programmes are scarce, incomplete and hardly comparable, which makes these evaluations (technically) difficult to implement.

Theoretical impact evaluations shed light about the potential positive impact of health workforce task shifting on addressing shortages and on correcting inefficiencies in task distribution (Scheffler and Arnold, 2018[82]).[17] However, simulations do not provide evidence about the real outcomes of flexible training policies.

Brazil's Family Health Strategy, launched in 1994, is a cornerstone of the Unified Health System, providing universal health coverage to the population. The programme targets primary care access for low-income and vulnerable groups through community-based clinics and multidisciplinary teams of doctors, nurses, and community health workers. Community health workers are recruited from local community members who are familiar with the area's geography and culture and have community endorsement. They undergo up to eight weeks of initial residential training, followed by continuous training and supervision led by teacher-trained professionals (Sripathy et al., 2017[83]). The training curriculum, developed by the Ministry of Health and approved by the Ministry of Education, is then adapted by municipalities to meet local needs. The successful expansion of Brazil's Family Health Strategy, centred on community health workers, has facilitated the transformation of healthcare delivery from a hospital-centred model to a community-based, preventive approach. This shift has improved access to comprehensive primary care, reducing hospitalisations for chronic conditions manageable with outpatient care (Macinko et al., 2010[84]). As a result, the demand on secondary and tertiary providers has eased, leading to cost savings and alleviating workforce shortages across the Brazilian healthcare system.

Some evidence exists about the positive effects of training programmes on nurse and long-term care workers retention (and thus on the reduction of workforce shortages).

- Long-term care is a labour-intensive activity, and many countries face relatively high levels of staff turnover and job vacancy rates. A study examines the association between workforce retention and related staffing measures and the quality of English long-term care homes using a national database of social care providers' staffing. The analysis finds significant correlations between quality and the levels of staffing vacancies and retention of both residential and nursing homes. The findings suggest that quality could change for the average care home with a relatively small alteration in staffing circumstance (Allan and Vadean, 2021[85]).

- In 2009, Leese et al. published a study aimed at investigating the impact on care provision of employment policies in England to encourage retention of primary and community nurses over the age of 50 years. Results show that when older nurses left, there was concern about the loss of skills, experience and intelligence about local communities. Also, concern about pensions was a key influence on nurses' decisions to stay or leave nursing. In areas with a high number of older nurses, opportunities were being taken to promote flexible working by means of workshops to raise awareness of the possibilities available to continue in nursing for longer (Leese, Storey and Cheater, 2009[86]).

In a much broader context, some examples exist on the evaluation of the impact of general active labour market policies (ALMP) by sector. In Ireland, evidence shows that in the Community Employment programme, labour market outcomes post participation tend to be better for participants in Health and Social Care Schemes (see Fig 6.5 of the source). One of the reasons may lie in the higher degree of specialisation of these specific schemes, which may make it easier for participants to identify job vacancies in need of the job skills they acquired during their participation in Community Employment (OECD/Department of Social Protection, Ireland/EC-JRC, 2024[87]).

To summarise, few studies evaluate the impact of flexible training of low-skilled workers on the reduction of health and care workforce shortages. However, abundant evidence suggests a positive effect of task shifting strategies on health outcomes, which indirectly free resources of high-skilled professionals. Moreover, many of these studies identify the lack of adequate training as a barrier for effective implementation of these strategies, advocating for more and more flexible training pathways.

Conclusions

The evidence presented in this report demonstrates that flexible pathways into entry-level health and care positions represent a critical yet underutilised strategy for addressing persistent workforce challenges in the health sector. By implementing flexible and modularised training programmes, strengthening partnerships, leveraging digital and hybrid learning, and implementing quality career guidance and recognition of prior learning, barriers to entry for adult learners can be lowered, addressing critical skill shortages. These approaches are particularly valuable for attracting non-traditional candidates and facilitating the transition of informal caregivers into formal health and care roles.

Moving forward, governments and health systems should prioritise the development of comprehensive policy frameworks that integrate flexible learning pathways that address the current rigidity of health and care career structures while ensuring the quality of training and its relevance to meet the growing complexity of care needs, particularly in long-term care settings. Systematic evaluation mechanisms to assess the impact of flexible pathways on both individual employment outcomes and broader health system performance is also necessary, including measuring improvements in care quality, workforce stability, and the effectiveness of task reallocation in alleviating shortages among higher-skilled health and care workers. However, while creating flexible pathways into entry-level positions is a good strategy to address shortages, it must be balanced with sustained investment in the education and training of regulated health professions. The healthcare sector requires a diverse interprofessional structure that contributes in their unique ways to a larger need, with a variety education, training and experience. Without an investment in both flexible and traditional pathways, there is a risk that health systems might favour quicker, cheaper workforce solutions and underinvest in progressional education for highly regulated professions (i.e. doctors, nurses, dentists etc.). Without solid long-term planning and financing of professional education, the quality and sustainability of care may suffer. To address this and ensure a sustainable and skilled workforce, policies in flexible pathways must be part of broader health workforce planning that is grounded in labour market analysis and aligned with the population's health needs.

References

ADB (2024), *Aging Well in Asia: Asian Deveopment Policy Report*, Asian Development Bank, https://doi.org/10.22617/SGP240253-3. [38]

ADB (2020), *Lessons from Thailand's National Community-Based Long-Term Care Program for Older Persons*, Asian Development Bank, https://www.adb.org/publications/thailand-long-term-care-older-persons. [43]

Allan, S. and F. Vadean (2021), "The Association between Staff Retention and English Care Home Quality", *Journal of Aging & Social Policy*, Vol. 33/6, pp. 708-724, https://doi.org/10.1080/08959420.2020.1851349. [85]

Amaral, E. and J. Norcini (2022), "Quality assurance in health professions education: Role of accreditation and licensure", *Medical Education*, Vol. 57/1, pp. 40-48, https://doi.org/10.1111/medu.14880. [88]

Anderson, M. et al. (2021), "Securing a sustainable and fit-for-purpose UK health and care workforce", *The Lancet*, Vol. 397/10288, pp. 1992-2011, https://doi.org/10.1016/s0140-6736(21)00231-2. [14]

Anthony, B. et al. (2019), "General medical services by non-medical health professionals: a systematic quantitative review of economic evaluations in primary care", *British Journal of General Practice*, Vol. 69/682, pp. e304-e313, https://doi.org/10.3399/bjgp19x702425. [81]

Apollo MedSkills (n.d.), *About us*, https://apollomedskills.com/Home (accessed on December 2024). [29]

Apollo MedSkills (n.d.), *Apollo MedSkills Courses*, https://www.apollohospitals.com/academics-research/courses/apollo-medskills/ (accessed on December 2024). [30]

Bes et al. (2023), "Recruitment and retention of general practitioners in European medical deserts: a systematic review", *Rural and Remote Health*, https://doi.org/10.22605/rrh7477. [70]

California Health Workforce Alliance (2013), *Taking Innovation To Scale: Community Health Workers, Promotores, and the Triple Aim*, https://www.phi.org/thought-leadership/taking-innovation-to-scale-community-health-workers-promotores-and-the-triple-aim/. [76]

CHW Central (2018), *Zimbabwe's Village Health Worker Program*, https://chwcentral.org/zimbabwes-village-health-worker-program/. [46]

Cosgrave, C., C. Malatzky and J. Gillespie (2019), "Social Determinants of Rural Health Workforce Retention: A Scoping Review", *International Journal of Environmental Research and Public Health*, Vol. 16/3, p. 314, https://doi.org/10.3390/ijerph16030314. [69]

Department of Health and Aged Care (2023), *My Aged Care Workforce Learning Strategy 2023*, https://www.health.gov.au/sites/default/files/2023-12/my-aged-care-workforce-learning-strategy-2023.pdf. [41]

Dubey, M. (2016), *National Skills Network*, https://nationalskillsnetwork.in/apollo-medskills-medvarsity/ (accessed on December 2024). [31]

Echo India (2024), *About*, https://echoindia.in/about/. [35]

Elderly Service Providers Association (2025), *Career Level Classification System for Long-term Care Professionals*, https://careprofessional.org/careproweb/summary (accessed on 2 June 2025). [54]

European Commission (2021), *Adult education and training in Europe: Building*, European Union Publications Office, https://doi.org/10.2797/788535. [26]

Federal Ministry of Health (2023), *Nursing care reforms set in motion*, https://www.bundesregierung.de/breg-en/news/law-nursing-care-reform-2183506. [42]

Frogner, B., B. Stubbs and S. Skillman (2018), *Emerging Roles and Occupations in the Health Workforce*, Center for Health Workforce Studies, University of Washington. [22]

Frontline Media (2025), *Zimbabwe to Absorb 22,000 Community Health Workers Into Civil Service by Year-End*, https://frontlinemedia.news/2025/08/zimbabwe-to-absorb-22000-community-health-workers-into-civil-service-by-year-end/. [49]

Fulton, B. et al. (2011), "Health workforce skill mix and task shifting in low income countries: a review of recent evidence", *Human Resources for Health*, Vol. 9/1, https://doi.org/10.1186/1478-4491-9-1. [75]

German Federal Ministry of Health (2023), *Digital Together: Germany's Digitalisation Strategy for Health and Care*, https://www.bundesgesundheitsministerium.de/fileadmin/Dateien/3_Downloads/D/Digitalisierungsstrategie/Germany_s_Digitalisation_Strategy_for_Health_and_Care.pdf. [16]

Hartzler, A. et al. (2018), "Roles and Functions of Community Health Workers in Primary Care", *The Annals of Family Medicine*, Vol. 16/3, pp. 240-245, https://doi.org/10.1370/afm.2208. [77]

Hoeft, T. et al. (2017), "Task-Sharing Approaches to Improve Mental Health Care in Rural and Other Low-Resource Settings: A Systematic Review", *The Journal of Rural Health*, Vol. 34/1, pp. 48-62, https://doi.org/10.1111/jrh.12229. [72]

ITU (2025), *Facts and Figures 2023 - The Gender Digital Divide*, International Telecommunication Union, https://www.itu.int/itu-d/reports/statistics/2023/10/10/ff23-the-gender-digital-divide/. [21]

ITU (2023), *Facts and Figures 2023 - Internet Use*, International Telecommunication Union, https://www.itu.int/itu-d/reports/statistics/2023/10/10/ff23-internet-use/ (accessed on 28 April 2025). [20]

Jun, J. et al. (2021), "Relationship between nurse burnout, patient and organizational outcomes: Systematic review", *International Journal of Nursing Studies*, Vol. 119, p. 103933, https://doi.org/10.1016/J.IJNURSTU.2021.103933. [3]

Kane, R. et al. (2007), "Nurse staffing and quality of patient care.", *Evidence Report/technology Assessment* 151, pp. 1-115, http://europepmc.org/books/NBK38315 (accessed on 16 August 2022). [2]

Leese, B., C. Storey and F. Cheater (2009), "Retaining primary and community nurses over the age of 50 years: the views of managers", *Journal of Nursing Management*, Vol. 17/8, pp. 975-985, https://doi.org/10.1111/j.1365-2834.2009.01019.x. [86]

Leong, S. et al. (2021), "Task shifting in primary care to tackle healthcare worker shortages: An umbrella review", *European Journal of General Practice*, Vol. 27/1, pp. 198-210, https://doi.org/10.1080/13814788.2021.1954616. [80]

Lozano, Rafael et al. (2020), "Measuring universal health coverage based on an index of effective coverage of health services in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019", *The Lancet*, Vol. 396 (10258), pp. pp. 1250-1284, https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30750-9/fulltext. [7]

Macinko, J. et al. (2010), "Major Expansion Of Primary Care In Brazil Linked To Decline In Unnecessary Hospitalization", *Health Affairs*, Vol. 29/12, pp. 2149-2160, https://doi.org/10.1377/hlthaff.2010.0251. [84]

Maier, C., L. Aiken and R. Busse (2017), "Nurses in advanced roles in primary care: Policy levers for implementation", *OECD Health Working Papers*, No. 98, OECD Publishing, Paris, https://doi.org/10.1787/a8756593-en. [78]

Maier, C. et al. (eds.) (2022), *Education and planning: anticiâting and responding to skill gaps, changing skill needs and competencies*, European Observatory on Health Systems and Policies/ Cambridge University Press. [24]

Maier, C. et al. (2023), "Skill-Mix Changes Targeting Health Promotion and Prevention Interventions and Effects on Outcomes in all Settings (Except Hospitals): Overview of Reviews", *International Journal of Public Health*, Vol. 68, https://doi.org/10.3389/ijph.2023.1605448. [79]

Medina, L., A. Jonelis and M. Cangul (2017), "The Informal Economy in Sub-Saharan Africa: Size and Determinants", *IMF Working Papers*, Vol. 2017/156, https://doi.org/10.5089/9781484305942.001. [48]

Mignote, H. et al. (2023), *Establishing Career Pathways for Community Health Workers – Models and Key Considerations*, https://conference.coregroup.org/wp-content/uploads/2024/09/poster-presentations-updated-aug-30-2.pdf. [52]

Ministry of Health and Care Services (2023), *State Budget*, https://www.regjeringen.no/no/dokumenter/prop.-1-s-20222023/id2931020/?ch=1. [66]

Munyai, O., A. Mudau and N. Mashau (2025), "Village health work in the primary healthcare of Zimbabwe: Health workers' perspectives", *PLoS One*, Vol. 20/8, https://doi.org/10.1371/journal.pone.0326956. [47]

Murray, S. (2019), *Moocs struggle to lift rock-bottom completion rates | Financial Times*, https://www.ft.com/content/60e90be2-1a77-11e9-b191-175523b59d1d. [33]

National Skill Development Corporation (n.d.), *About us*, https://nsdcindia.org/about-us (accessed on 2024). [28]

NITI Aayog (2024), *Senior Care Reforms in India: Reimagining the Senior Care Paradigm*, NITI Aayog Government of India, https://www.niti.gov.in/sites/default/files/2024-02/Senior%20Care%20Reforms%20in%20India%20Final%20Version%20Website-compressed.pdf. [37]

Norwegian Health Workforce Commission (2023), *NOU: Tid for handling - Personell i en bærekraftig helse- og omsorgstjeneste*, https://www.regjeringen.no/no/dokumenter/nou-2023-4/id2961552/. [17]

NOU (2018), *Kvalifisert, forberedt og motivert: Et kunnskapsgrunnlag om struktur og innhold i videregående opplæring*. [62]

Noya, F. et al. (2021), "Strategies to Facilitate Improved Recruitment, Development, and Retention of the Rural and Remote Medical Workforce: A Scoping Review", *International Journal of Health Policy and Management*, https://doi.org/10.34172/ijhpm.2021.160. [71]

Noyes, J. et al. (2020), "A systematic review of digital badges in health care education", *Medical Education*, Vol. 54/7, pp. 600-615, https://doi.org/10.1111/medu.14060. [6]

OECD (2023), *Beyond Applause? Improving Working Conditions in Long-Term Care*, OECD Publishing, Paris, https://doi.org/10.1787/27d33ab3-en. [61]

OECD (2023), *Flexible adult learning provision: What it is, why it matters and how to make it work*, OECD, Paris, https://www.oecd.org/content/dam/oecd/en/topic/policy-sub-issues/adult-learning/booklet-flexibility-2023.pdf. [11]

OECD (2023), *Health at a Glance 2023: OECD Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/7a7afb35-en. [25]

OECD (2023), *Recognition of prior learning: A practical guide for policy makers*, OECD, Paris, https://www.oecd.org/content/dam/oecd/en/topics/policy-sub-issues/adult-learning/booklet-rpl-2023.pdf. [63]

OECD (2021), *Career Guidance for Adults in a Changing World of Work*, Getting Skills Right, OECD Publishing, Paris, https://doi.org/10.1787/9a94bfad-en. [65]

OECD (2021), *OECD Skills Outlook 2021: Learning for Life*, OECD Publishing, https://doi.org/10.1787/0ae365b4-en. [64]

OECD (2020), *Increasing Adult Learning Participation: Learning from Successful Reforms*, Getting Skills Right, OECD Publishing, Paris, https://doi.org/10.1787/cf5d9c21-en. [53]

OECD (2020), "The potential of online learning for adults: Early lessons from the COVID-19 crisis"*, OECD Policy Responses to Coronavirus (COVID-19)*, OECD Publishing, Paris, https://doi.org/10.1787/ee040002-en. [34]

OECD (2020), *Who Cares? Attracting and Retaining Care Workers for the Elderly*, OECD Health Policy Studies, OECD Publishing, Paris, https://doi.org/10.1787/92c0ef68-en. [39]

OECD (2016), *Getting Skills Right: Assessing and Anticipating Changing Skill Needs*, Getting Skills Right, OECD Publishing, Paris, https://doi.org/10.1787/9789264252073-en. [4]

OECD (2016), *Health Workforce Policies in OECD Countries: Right Jobs, Right Skills, Right Places*, OECD Health Policy Studies, OECD Publishing, Paris, https://doi.org/10.1787/9789264239517-en. [15]

OECD (forthcoming), *Digital, AI and soft skills in major health occupations. What do we know about new demand?*. [23]

OECD/Department of Social Protection, Ireland/EC-JRC (2024), *Impact Evaluation of Ireland's Active Labour Market Policies*, Connecting People with Jobs, OECD Publishing, Paris/Department of Social Protection, Ireland, Dublin/European Commission, Joint Research Centre, Brussels, https://doi.org/10.1787/ec67dff2-en. [87]

OECD/ILO (2022), *Equipping Health Workers with the Right Skills: Skills Anticipation in the Health Workforce*, Getting Skills Right, OECD Publishing, Paris, https://doi.org/10.1787/9b83282e-en. [1]

Ono, T., G. Lafortune and M. Schoenstein (2013), "Health Workforce Planning in OECD Countries: A Review of 26 Projection Models from 18 Countries", *OECD Health Working Papers*, No. 62, OECD Publishing, Paris, https://doi.org/10.1787/5k44t787zcwb-en. [13]

Panda, R. et al. (2024), "A mixed methods evaluation of the impact of ECHO® telementoring model for capacity building of community health workers in India", *Human Resources for Health*, https://doi.org/10.1186/s12960-024-00907-y. [36]

Pharmacy Council (2015), *Improving Access to Essential Medicines in Tanzania: The role of ADDO Program.*, https://www.pc.go.tz/files/The%20ADDO%20Program%20%20Story-%20Feb%202015.pdf. [51]

Rao, K. and A. Schmidt (2023), "Human Resources for Health in South-East Asia: Challenges and Strategies", *WHO South East Asia Journal of Public Health*, Vol. 12, pp. 1-3, https://doi.org/10.4103/2224-3151.386476. [67]

ReBUILD Consortium (2015), *Understanding health worker incentives in post-crisis settings: Zimbabwe review*, https://assets.publishing.service.gov.uk/media/57a089fbe5274a27b2000365/Understandinghealthworkerincentivesdocreview ZimFinal210115.pdf. [44]

Rivard, R. (2013), *Researchers explore who is taking MOOCs and why so many drop out*, https://www.insidehighered.com/news/2013/03/08/researchers-explore-who-taking-moocs-and-why-so-many-drop-out. [32]

Roman, L. et al. (2007), "Addressing Mental Health and Stress in Medicaid-Insured Pregnant Women Using a Nurse-Community Health Worker Home Visiting Team", *Public Health Nursing*, Vol. 24/3, pp. 239-248, https://doi.org/10.1111/j.1525-1446.2007.00630.x. [73]

Rutta, E. et al. (2009), "Creating a new class of pharmaceutical services provider for underserved areas: the Tanzania accredited drug dispensing outlet experience", *Progress in community health partnerships : research, education, and action*, Vol. 3/2, pp. 145-153, https://doi.org/10.1353/cpr.0.0063. [50]

SAQA (2014), *Current Recognition of Prior Learning (RPL) initiatives in South Africa*, South African Qualifications Authority, https://www.saqa.org.za/wp-content/uploads/2023/02/Current-Recognition-of-Prior-Learning-RPL-initiatives-in-South-Africa.pdf. [60]

SAQA (2014), *National Policy for Implementation of Recognition of Prior Learning*, South African Qualifications Authority, https://www.dhet.gov.za/Part%20C%20%20Policies/NQF/7.National%20Policy%20for%20the%20Implementation%20of%20the%20Recognition%20of%20Prior%20Learning.pdf. [56]

SAQA (2002), *The Recognition of Prior Learning in the context of the South African National Qualifications Framework*, South African Qualifications Authority, https://chieta.org.za/wp-content/uploads/easydocs/uploads/2022/09/6336068b18445_RPL%20-%20SAQA.pdf. [57]

Scheffler, R. and D. Arnold (2018), "Projecting shortages and surpluses of doctors and nurses in the OECD: what looms ahead", *Health Economics, Policy and Law*, Vol. 14/2, pp. 274-290, https://doi.org/10.1017/s174413311700055x. [82]

Scheffler, R. et al. (2009), "Estimates Of Health Care Professional Shortages In Sub-Saharan Africa By 2015", *Health Affairs*, Vol. 28/Supplement 1, pp. w849-w862, https://doi.org/10.1377/hlthaff.28.5.w849. [89]

Skills for Care (2024), *Care workforce pathway for adult social care*, https://www.skillsforcare.org.uk/Developing-your-workforce/Care-workforce-pathway-for-adult-social-care.aspx. [40]

South African Career Development Association (2022), *Recognition of Prior Learning for Career Development Practitioners*, https://cdn.sacda.org.za/media/files/RPL-Policy-v1.1.pdf. [59]

South African Nursing Council (2009), *Guide for the Implementation of Recognition of Prior Learning by Nursing Education Institutions*, https://www.sanc.co.za/wp-content/uploads/2020/06/SANC-Guide-RPL.pdf. [58]

Sripathy, A. et al. (2017), "Health Professional Education And Universal Health Coverage: A Summary Of Challenges And Selected Case Studies", *Health Affairs*, Vol. 36/11, pp. 1928-1936, https://doi.org/10.1377/hlthaff.2017.0517. [83]

Study team (2021), *Cross-border Care Workers in Japan: Immigration Policy for Care*, ERIA Research Project Report FY2021 No. 09, https://www.eria.org/uploads/media/Research-Project-Report/2021-09-Framework-Qualification-Long-term-Care-India-Japan-Philippines/10_ch.3-Cross-border-Care-Worker-Japan.pdf. [55]

Sutherland, E. (2023), *OECD.AI Policy Observatory*, https://oecd.ai/en/wonk/artificial-intelligence-in-health-big-opportunities-big-risks. [18]

Technical Edcuation and Skills Development Authority (2024), *Ladderized Education Program*, https://tesda.gov.ph/About/TESDA/87. [27]

Waitzkin, H. et al. (2010), "Promotoras as Mental Health Practitioners in Primary Care: A Multi-Method Study of an Intervention to Address Contextual Sources of Depression", *Journal of Community Health*, Vol. 36/2, pp. 316-331, https://doi.org/10.1007/s10900-010-9313-y. [74]

WHO (2024), *A decade review of the health workforce in the WHO African Region, 2013-2022*, WHO Africa Region, https://www.afro.who.int/sites/default/files/2024-05/9789290314981-eng.pdf. [8]

WHO (2024), *Monitoring progress on universal health coverage and the health-related Sustainable Development Goals in the South-East Asia Region: 2024 update*, World Health Organization, https://www.who.int/publications/i/item/9789290229636. [12]

WHO (2019), *Classifying health workers: mapping occupations to the international standard classification*, https://cdn.who.int/media/docs/default-source/health-workforce/dek/classifying-health-workers.pdf?sfvrsn=7b7a472d_3&download=true. [9]

WHO (2010), *Increasing Access to Health Workers in Remote and Rural Areas Through Improved Retention: Global Policy Recommendations*, World Health Organization, https://iris.who.int/handle/10665/44369. [68]

WHO (2010), *Monitoring the building blocks of health systems: A handbook of indicators and their measurement strategies*, World Health Organization, https://iris.who.int/handle/10665/258734. [10]

WHO Africa (2024), *Zimbabwe launches Health Workforce Strategy 2023–2030 and signs Health Workforce Compact*, https://www.afro.who.int/countries/zimbabwe/news/zimbabwe-launches-health-workforce-strategy-signs-health-workforce-compact. [45]

World Bank (2023), *Individuals using the Internet (% of population)*, https://data.worldbank.org/indicator/IT.NET.USER.ZS?locations=8S-Z4&type=shaded (accessed on 28 April 2025). [19]

World Health Organization (2016), *Global strategy on human resources for health: Workforce 2030*, World Health Organization, https://iris.who.int/handle/10665/250368. [5]

Notes

[1] Selected countries will be those who have implemented relevant policies to provide flexible pathways into healthcare professions. A comprehensive review of education and training policies in the health sector is out of the scope of this project.

[2] Botswana, Burundi, the Democratic Republic of Congo, Malawi, Mali, Niger, Rwanda and Senegal.

[3] The Central African Republic, Chad, Eritrea, Gabon, The Gambia, Guinea, Lesotho, Liberia, Madagascar and Mauritius.

[4] To support the development of accreditation bodies around the world, the World Federation of Medical Education, in collaboration with the WHO and an international task force, published the Guidelines for Accreditation of Basic Medical Education, which later served as the basis for the 2013 WHO policy briefing on medical accreditation. These standards were updated in 2015 and 2020, and the World Federation of Medical Education subsequently developed a set of criteria for accreditation bodies and established a programme for the international recognition of accreditation agencies (Amaral and Norcini, 2022[88]).

[5] For example, the Norwegian programme *Men in Health*, is a broad initiative to attract men to healthcare jobs, but also includes specific initiatives to recruit men in the area of long-term care.

[6] AMU course catalogue for the healthcare sector can be found here: https://www.ug.dk/voksen-og-efteruddannelser/arbejdsmarkedsuddannelser.

[7] "Barangay" is the smallest political-administrative unit of the Philippines, corresponding to a village size settlement.

[8] More information about the Eixample Clinic Vocational Training Institute can be found here: https://eixampleclinic.es/es/.

[9] More information about the NHS Apprenticeship programme can be found here: https://www.healthcareers.nhs.uk/career-planning/study-and-training/nhs-apprenticeships.

[10] ILO consultation with the Learning Development Division (LDD-NITESD) at TESA on 20 November 2024.

[11] Learning Development Division (LDD-NITESD), TESDA, "Enrolment and Graduate Data of TVET WTR Programs in Health Sector", provided on 29 November 2024.

[12] For more detail on how to set up a recognition of prior learning system, see: https://www.oecd.org/content/dam/oecd/en/topics/policy-sub-issues/adult-learning/booklet-rpl-2023.pdf.

[13] More information on individual assessments of skills within the AMU system can be found here: https://www.uvm.dk/arbejdsmarkedsuddannelser/hvad-og-hvor/individuel-kompetencevurdering--ikv-.

[14] More information on the BC Health Career Access Program can be found here: https://www2.gov.bc.ca/gov/content/employment-business/job-seekers-employees/find-a-job/health-care.

[15] NHS Health Careers portal can be found here: https://www.healthcareers.nhs.uk/.

[16] Skills England's occupational map can be found here: https://occupational-maps.skillsengland.education.gov.uk/.

[17] For example, Scheffler et al. use a forecasting model to estimate the need for, supply of, and shortage of doctors, nurses, and midwives in 39 African countries for 2015. The forecast indicated that 31 countries will experience needs-based shortages of doctors, nurses, and midwives, totalling approximately 800 000 health professionals. Authors models estimate the additional annual wage bill required to eliminate the shortage at about USD 2.6 billion (2007 USD) – more than 2.5 times wage-bill projections for 2015. Further simulations illustrate and discuss how changes in workforce mix can reduce this cost, as well as the policy implications (workforce skill-mix changes, worker incentives, and training capacity) that would allow countries to realise these savings (Scheffler et al., 2009[89]).

Getting Skills Right

Flexible Learning Pathways into Healthcare Occupations

Persistent skill shortages in healthcare are leaving many care needs unmet. This report examines how flexible training and well-defined career pathways can help adults transition into entry-level healthcare roles. Produced jointly by the OECD and the ILO, it examines practices from high, middle and low-income countries and highlights innovative approaches such as modular learning, online education, recognition of prior learning and strong partnerships between training providers and healthcare employers. The report shows that despite the fact that many occupations in the health and care sector are regulated, there is a significant opportunity to take advantage of flexibility in adult learning opportunities and facilitate the entry of a broader range of candidates to the health and care sector. By making adult learning more accessible and responsive, countries can better meet growing healthcare demands, improve care quality and create decent employment opportunities.

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