Health workers are the cornerstone of health systems. Despite all the interest in self-treatment and the growing role of eHealth and mHealth, it is still – overwhelmingly – health workers that provide health services to the population. Jobs in the health and social sector now account for more than 10% of total employment in many OECD countries. In 2013, 3.6 million doctors and 10.8 million nurses were working in OECD countries, up from 2.9 million doctors and 8.3 million nurses in 2000.

Despite this growth, discussions about health workforce issues in OECD countries often continue to focus on shortages of health workers, with persisting concerns that the upcoming retirement of the ‘baby-boom’ generation of doctors and nurses might exacerbate such shortages. This publication finds that OECD countries anticipated this wave of retirement by increasing student intakes in medical and nursing education programmes over the past decade. Many new doctors and nurses are thus expected to enter the labour market to replace those who will retire. In addition, pension reforms and other initiatives have increased retention rates of doctors and nurses in the profession, also contributing to maintain if not increasing the supply. In this context, health workforce concerns have shifted from worries of widespread shortages towards more specific issues related to ensuring the right mix of health workers, with the right skills, and providing services in the right places, to better respond to changing population health needs.

This publication analyses recent trends and policies adopted by OECD countries affecting the demand and supply of health workers. While it focuses on doctors and nurses given the predominant role they continue to play, it also highlights efforts underway to move beyond these traditional professional boundaries. Addressing the future health needs of ageing populations, with many more people living with one or more chronic conditions, will require more innovations in health service delivery than those we have seen so far. There will be a need to use more effectively new technologies and the skills of different categories of health workers at all levels, and to provide more effective access to services to people, wherever they live.

Numerus clausus policies should be supported by more robust information about future job prospects

- Numerus clausus policies (the setting of annual quotas on the number of students admitted in different programmes) remain a powerful policy lever for governments to adjust the supply of health workers to projected demand and modify the composition of the health workforce, while keeping budgets under control. But there is a need to make better use of this policy instrument.
- Nearly all OECD countries have decided to increase the number of students admitted to medical and nursing education since 2000 in response to concerns about current or possible future shortages. This will result in growing numbers of new medical and nursing graduates entering the labour market in the years ahead to replace those who will exit.
- At least one country, Australia, has taken the bold move to abandon its numerus clausus policy for nursing and other university programmes (with the notable exception of medical education) to open up entry into higher education. As expected, following the removal of this quota in 2009, the number of students admitted in nursing has increased (by 25% between 2009 and 2013). Interestingly though, it has not increased more rapidly than in the previous years when the numerus clausus was still in place (a 40% increase between 2005 and 2009), because of constraints on training capacity and lack of suitable applicants.
• A critical element for health workforce planning and the decision-making of prospective students is the availability of robust labour market information about future skill needs. It is also important for health workforce planning to use a more comprehensive approach that takes into account possible substitutions between different categories of workers, to avoid training too many workers who might usefully be substituted by others.

• A number of countries, such as England, France and Canada, have deliberately increased the number of post-graduate training places in general medicine to address specific concerns about shortages of general practitioners (GPs), although it has not always been easy to attract a sufficient number of medical graduates to fill these places. Complementary actions are needed to make general medicine a more attractive option for new doctors, including narrowing the gap in pay rates compared with other specialties.

• The United States, Canada and the Netherlands have also increased student intakes in advanced education programmes for nurses, such as nurse practitioner (NPs) programmes, to increase the supply of “mid-level” providers and thus improve access to primary care. Evaluations show that advanced practice nurses with proper training can improve access to services and deliver the same quality of care as GPs for patients with minor illnesses, those requiring routine follow-up, and others. When advanced practice nurses take on some of the tasks previously performed by doctors, this can help free up the time of doctors and provide these services at a lower cost.

Reducing the reliance on foreign-trained health workers

• The Global Code of Practice on the International Recruitment of Health Personnel, adopted by all WHO members in 2010, encourages countries to improve their health workforce planning and respond to their future needs without relying unduly on the training efforts of other countries, particularly low-income countries suffering from acute shortages.

• In 2013-14, some 460 000 foreign-trained doctors and 570 000 foreign-trained nurses were working in OECD countries, accounting for about 17% of all doctors and 6% of nurses on average. More than one-third of these foreign-trained doctors and nurses were coming from other OECD countries. In many countries, the absolute number of foreign-trained doctors has increased between 2006 and 2013-14, but their share has come down, as the number of domestically-trained doctors and nurses increased more rapidly.

• The United States is by far the main destination country of foreign-trained health workers in absolute numbers, with more than 200 000 doctors and almost 250 000 nurses trained abroad in 2013. However, the inflows of foreign-trained doctors and nurses moving to the United States have come down from their peak of about 10 years ago because of growing numbers of domestic graduates, particularly nurses. The main countries of origin of foreign-trained health professionals working in the United States are India (for doctors) and the Philippines (for nurses), although the new inflows from these two countries have fallen sharply in recent years.

• The United Kingdom is the second main country of destination, with more than 48 000 foreign-trained doctors and 86 000 foreign-trained nurses in 2014. As in the United States, the annual inflows of foreign-trained doctors and nurses moving to the United Kingdom have come down from their peak of about 10 years ago because of increasing numbers of domestic graduates. However, the inflows of foreign-trained nurses in the United Kingdom have recently bounced back up due to an unexpected increase in demand from NHS employers which cannot readily be met from domestic sources. The composition of foreign-trained doctors has changed significantly in the United Kingdom, with growing numbers coming from other EU countries, notably Greece, Italy and Romania, rather than from Asia or Africa. Similarly for nurses, the recent rise in the number of foreign-trained nurses has been driven mainly by migration from Spain and Portugal.

• Some new EU countries in Central and Eastern Europe have seen a large increase in the emigration of their doctors and nurses to other EU countries. In many cases, this out-migration started before their accession to the EU, but it accelerated immediately afterwards because of the reduction in barriers to mobility. This has prompted countries like the Czech Republic, the Slovak Republic, Hungary and Romania to take actions to reduce the “push” factor by improving the pay rates and working conditions of doctors and nurses, despite tight budget constraints.
Using technology and changing scope of practice to address the health needs of populations living in underserved areas

- In all OECD countries, the number of doctors per capita tends to be much lower in rural/remote areas and in deprived urban areas. In countries like France and Canada, the number of doctors per population is at least two-times lower in rural regions than in urban regions.

- Countries have used a wide range of policies to try to achieve a better geographic distribution of doctors and provide adequate access for people living in underserved areas, with uneven success. These include policies targeting the selection of medical students coming from these underserved areas (e.g., Japan), to providing various types of financial incentives to attract and retain more doctors in these areas (e.g., Australia, Canada, France). A few countries (e.g., Germany) have used regulations to restrict the freedom of new doctors to set up a practice in areas deemed to be adequately supplied, along with some financial incentives to encourage them to locate in underserved areas. Such a policy mix may be the most effective approach to achieve the desired goal.

- Many countries have also promoted various types of innovations in health service delivery to achieve the goal of providing adequate access to services with fewer doctors on site. These include encouraging transfers of competences from doctors to nurses and other local health professionals, and the development of telemedicine to connect patients and doctors at a remote distance, successfully implemented in Canada, Australia and Finland.

Promoting a better match and more efficient use of the skills of health workers

- There is evidence of a considerable mismatch between the skills of health workers and skills requirements for their job. Based on the 2011-12 PIAAC survey, about 50% of doctors and 40% nurses reported being under-skilled for some of the tasks that they have to perform, while an even greater proportion (70% to 80% of doctors and nurses) reported being over-skilled, suggesting an important waste of human capital.

- Under-skilling calls for two broad types of actions: 1) reforms of curricula of initial education and training programmes to make sure that health workers acquire the new skills needed to perform well in new health service delivery models, including greater teamwork skills; and 2) promoting well-designed continuous professional development programmes to ensure that the skills of doctors and nurses are adapted to new tasks and job requirements.

- Regular re-licensing systems can provide strong incentives for doctors and nurses to continue upgrading their skills throughout their professional life. Out of 31 OECD countries, only 12 had implemented any mandatory continuous professional development policy for doctors linked to regular re-licensing in 2012-13.

- Nurses with an advanced university degree are much more likely to report being over-skilled for the job they do compared to those with a lower degree. The expansion of the scope of practice of these more highly-educated nurses would allow them to use their skills more fully.

- Given the large amount of public resources spent on health workers’ education and training, properly designed training programmes, including a greater recognition of on-the-job practical training, and a more efficient use of human resources on the workplace is critical to ensuring a greater return on public investments.