

Perspective

Implementing a decade of strengthening the health workforce in the WHO South-East Asia Region: achievements and way forward for primary health care

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Abstract

Background Health workers are the cornerstone of primary health care (PHC) services, the delivery of an effective coronavirus disease 2019 (COVID-19) response and progress towards universal health coverage (UHC). In 2014, the World Health Organization (WHO) South-East Asia Region committed to the Decade for Health Workforce Strengthening 2015–2024, and UHC became a regional flagship with a focus on strengthening the health workforce. Since its inception, three rounds of monitoring with standardized indicators have been completed.

Methods In 2019, data on human resources for health were collected through the National Health Workforce Accounts online platform by the country focal points; this was complemented by a regional online consultation in June 2020. A mid-term review report on the Decade for Health Workforce Strengthening was launched during the 73rd session of the Regional Committee in September 2020.

Results The availability of doctors, nurses and midwives in the South-East Asia Region has increased by 21% since the decade began in 2014. Nine countries of the region are now above the 2006 WHO threshold of 22.8 doctors, nurses and midwives per 10 000 population, compared with only six countries in 2014. However, only two countries are above the 2016 revised WHO threshold of 44.5 doctors, nurses and midwives per 10 000 population, the density estimated to be needed to achieve the Sustainable Development Goals. Countries of the WHO South-East Asia Region have made progress to different extents during the past 5 years on strengthening governance of human resources for health, data, rural retention and health professional education.

Discussion Addressing broader health workforce challenges and particularly PHC workforce challenges will require extra commitment and prioritization by governments for the second half of the decade. COVID-19 presents the necessity and an opportunity to increase long-term investment in the health workforce and in strengthening PHC in the South-East Asia Region.

Keywords: health workers, health workforce, primary health care, primary health care workforce, South-East Asia Region

Background

Health workers are the cornerstone of primary health care (PHC) services.¹ They are also critical for the delivery of an effective coronavirus disease 2019 (COVID-19) response and for progress towards universal health coverage (UHC).²

Global and regional health workforce agendas have evolved significantly since 2006, when the World Health Organization (WHO) highlighted the global urgency of addressing the existing critical human resources for health (HRH) shortages in order to reach the health Millennium Development Goals.

Efforts since have led to the health workforce in the region, particularly the PHC workforce, moving towards fulfilling the commitments set out in the Astana Declaration (Box 1).

The COVID-19 pandemic has underlined the importance of health workers in providing effective COVID-19 services while maintaining other essential health services. The pandemic has highlighted the need to strengthen the surge capacity response of health workers, to ensure their occupational safety from coronavirus infection and to support the health and well-being of this workforce. There is a policy window of opportunity to link these actions to longer term HRH-strengthening approaches.

Box 1. Timeline of global and regional policy context for developments in human resources for health

- 2006** *The world health report 2006* identified 57 countries with critical shortages of workforces to meet the health Millennium Development Goals. Six of these countries were members of the WHO South-East Asia Region.² All six of these countries took action to address these shortages, but progress was slow.³
- 2010** WHO launched a set of global policy recommendations, *Increasing access to health workers in remote and rural areas through improved retention*. The recommendations urged Member States to implement a series of measures to improve health workforce retention in underserved areas.
- 2013** WHO launched *Transforming and scaling up health professionals' education*. The guidelines called for new approaches to health professionals' education, in relation to both institutional and instructional dimensions.
- 2014** South-East Asia Region Member States recognized that more attention to and prioritization of health workforce policies were required to progress towards UHC. A Regional Committee resolution endorsed and committed to implementing the Decade for Health Workforce Strengthening 2015–2024.^{3,4} UHC became a regional flagship programme, with a focus on strengthening the health workforce and access to medicines.⁵
- 2015** The Sustainable Development Goals were launched in 2015 and reinforced the importance of addressing health workforce challenges to achieve the health goal (SDG 3).⁶
- 2016** The WHO *Global strategy on human resources for health: workforce 2030*⁷ and the report of the United Nations High-Level Commission on Health Employment and Economic Growth,⁸ both of which highlighted the importance of investing in the health workforce, were published.
- 2018** The Astana Declaration on PHC reinforced the importance of strengthening the PHC workforce to improve the accessibility and quality of PHC services.⁹
- 2020** The International Year of the Nurse and the Midwife and the publication of the report *State of the world's nursing 2020* provided an extra boost to the health workforce agenda in the region.¹⁰ The COVID-19 pandemic emerged, emphasizing the importance of resilient health systems and a solid health workforce platform for effective COVID-19 responses while maintaining other essential health services.

According to the WHO *Global strategy on human resources for health*, the estimated global and South-East Asia Region shortages of health workers will be 18 million and 6.9 million respectively in 2030, meaning that nearly 40% of this shortage burden will be in the South-East Asia region.⁷ Since the Decade for Health Workforce Strengthening launched in the South-East Asia Region in 2014, there have been three rounds of monitoring, in 2016, 2018 and 2020.^{11–13} The 2020 report on the mid-term review of progress during the Decade for Health Workforce Strengthening in the South-East Asia Region covers the first half of the decade and, where data are available, analyses the progress made on the overall health and PHC workforces.¹³ The review also describes challenges and the way forward for the PHC and overall health workforces during the second half of the decade. Some of the main findings, information on progress and reflections from the report are presented here.

Methods

Data for the mid-term review progress report on the Decade for Health Workforce Strengthening were collected through the National Health Workforce Accounts (NHWA) online platform in late 2019.¹⁴ Each South-East Asia Region country has an NHWA focal person from the ministry of health who collects HRH data from different sources, validates the data and then puts them on the NHWA online platform. The data collection was complemented by a regional online consultation conducted in June 2020.

Data for the 2020 report are more complete than data for previous reports. In particular, more complete data on the production of doctors, nurses, midwives, dentists and pharmacists were reported. In addition, for the first time, 10 South-East Asia Region countries reported data on other PHC workers such as medical assistants, community health workers, traditional medicine professionals, associate professionals and paramedical practitioners.¹³ These professionals represent a significant portion of the health workforce and play an important role in providing promotive, preventive and curative services in primary care.

Country HRH profiles were produced using the data described above and were then reviewed by the country NHWA focal points.¹³

The limitations of the data are threefold. First, data on the stock of health workers are frequently collected from health professional council registers, which tend to overestimate the number of health workers because these registers include all health workers who have registered since qualifying as professionals, even if they are no longer active. Some South-East Asia Region countries are progressively introducing live registries to address this limitation; however, this commonly leads to a reduction in the stock of health workers, referred to as the “data paradox” – as the quality of data improves, the stock of health workers drops.

Second, data on the composition and distribution of health workers are primarily from the public sector, since the availability of data from the private sector is limited.

Third, data on doctors, nurses, midwives, dentists and pharmacists come from the national or subnational level and

are generally not disaggregated by level of care. Therefore, there are no country data showing the availability of each of these five professional categories in primary care.

Results

Health workforce situation in the WHO South-East Asia Region

Availability of health workers

In all South-East Asia Region countries, excluding the Democratic People's Republic of Korea, the availability, or density, of doctors, nurses and midwives has increased by 21% since the start of the Decade for Health Workforce Strengthening in 2014.¹³ Nine South-East Asia Region countries are now above the 2006 WHO density threshold of 22.8 doctors, nurses and midwives per 10 000 population, compared with six countries in 2014.¹³ However, only two countries are above the 2016 revised WHO density threshold of 44.5 doctors, nurses and midwives per 10 000 population – the estimated density required to achieve the Sustainable Development Goals (SDGs) (Fig. 1).⁷ The densities of pharmacists and dentists have increased in about half of the region's countries over the same period.

Although the density of doctors, nurses and midwives is on a par with the Eastern Mediterranean Region (27.7) and African Region (12.7), the Western Pacific Region (55.5) has more than twice the density and the European Region (117) and the Region of the Americas (113) have more than four times the density that the South-East Asia Region (26.0) has.

For the first time, 10 countries reported on the availability of types of PHC workers beyond the five categories of doctors, nurses, midwives, dentists and pharmacists. Categories and titles of PHC workers across the region are diverse. Each country's categories were mapped against the International Standard Classification of Occupations 2008 (ISCO-08),¹⁵ to facilitate comparison across countries (Fig. 2). The available data show that PHC workers make a substantial contribution to the health workforce in six South-East Asia Region countries. As the data are incomplete for some countries, the contribution of PHC workers is most likely underestimated; however, the data should become more accurate with time as countries move towards standardized reporting of the PHC workforce.

Four countries (Bhutan, Indonesia, Nepal and Thailand) have a ratio of three or more nurses and midwives to one doctor (Fig. 3). No recommended standard for ratio of nurses to doctors exists but, for comparison, the average ratio is 2.7 nurses per doctor in the Organisation for Economic Co-operation and Development (OECD) countries.¹⁶ Historically, Bangladesh has had more doctors than nurses and midwives, and since the previous report in 2018 this ratio has narrowed, but it remains at less than one nurse/midwife to one doctor.

Training of key health professionals

Trend data on new graduates of domestic pre-service education institutions are not available; however, seven South-East Asia Region countries reported these data for the first time in 2018, which will serve as the baseline moving forward. The annual output of nursing graduates varies widely across

Fig. 1. Trends in the availability of doctors, nurses and midwives in South-East Asia Region countries, 2014–2018

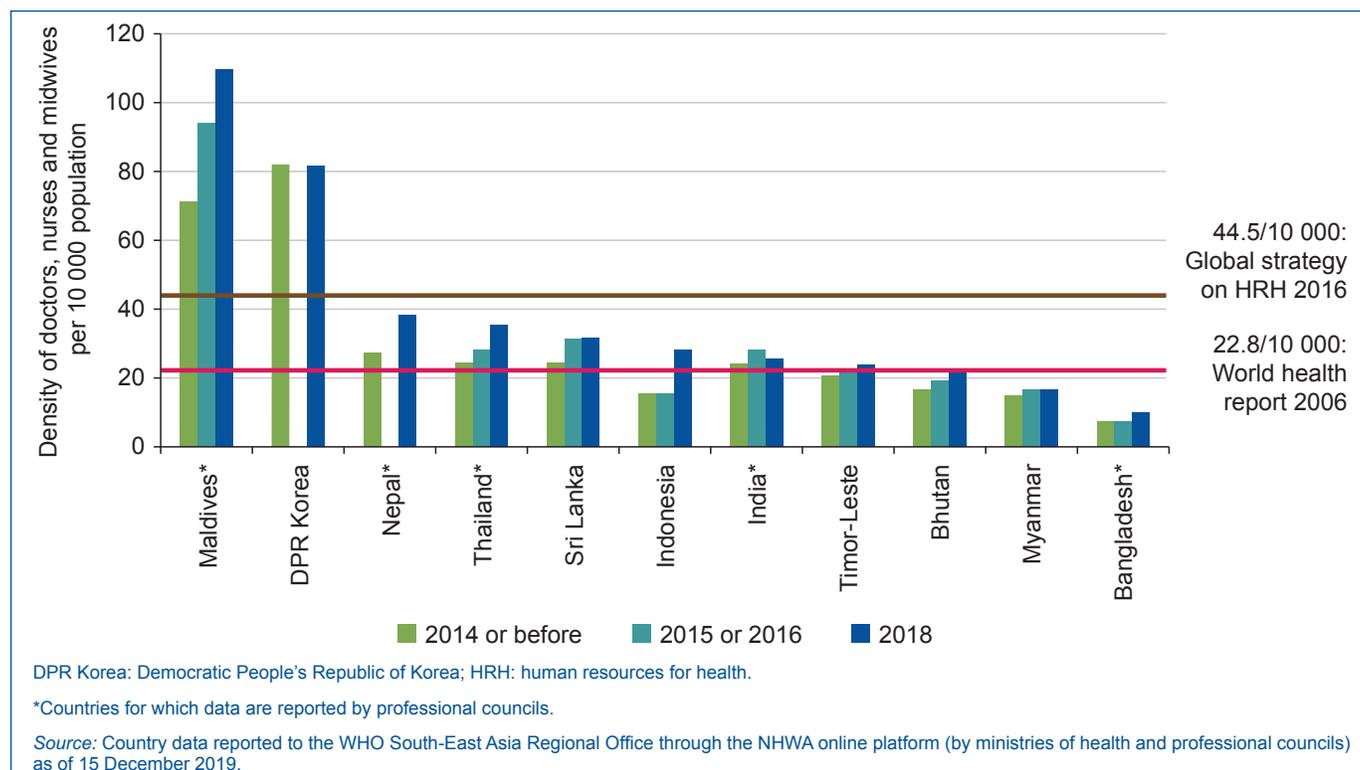


Fig. 2. Availability of primary health care workers in South-East Asia Region countries (density per 10 000 population), 2018 (or latest year for which data are available)

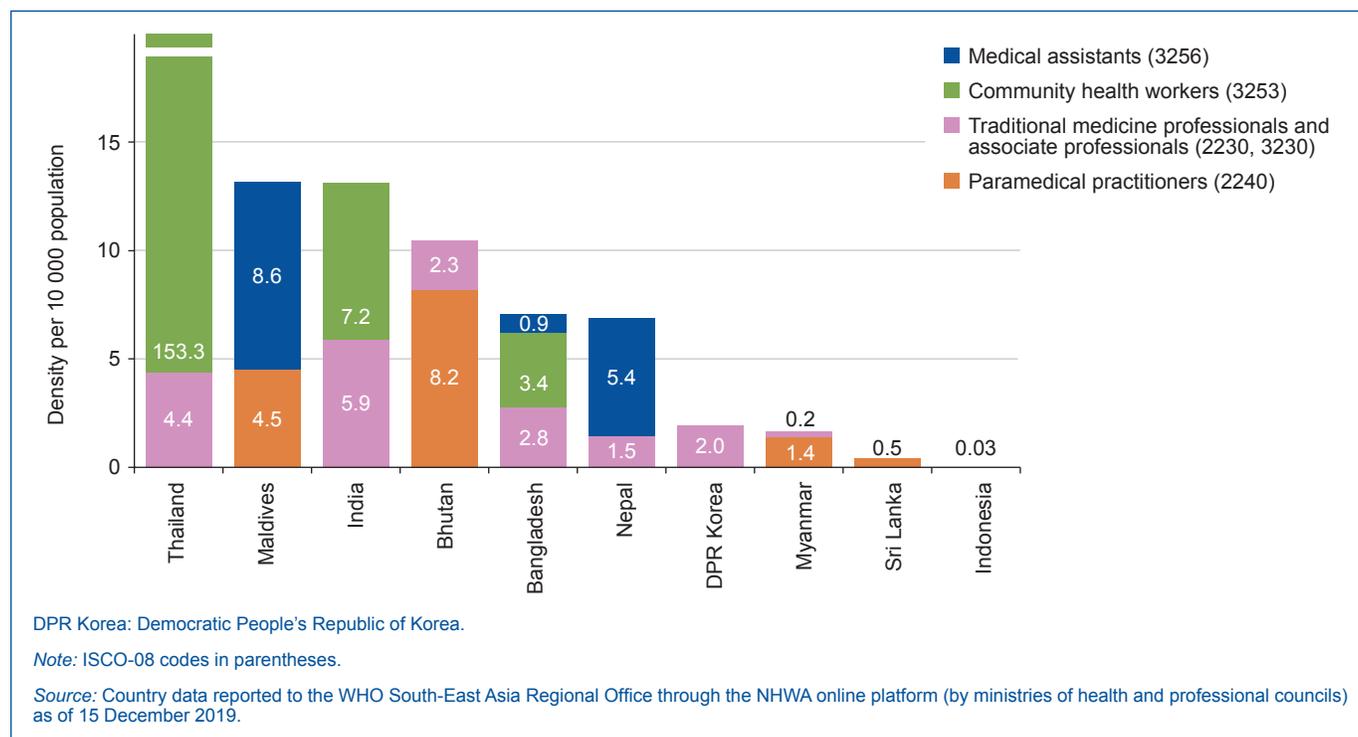
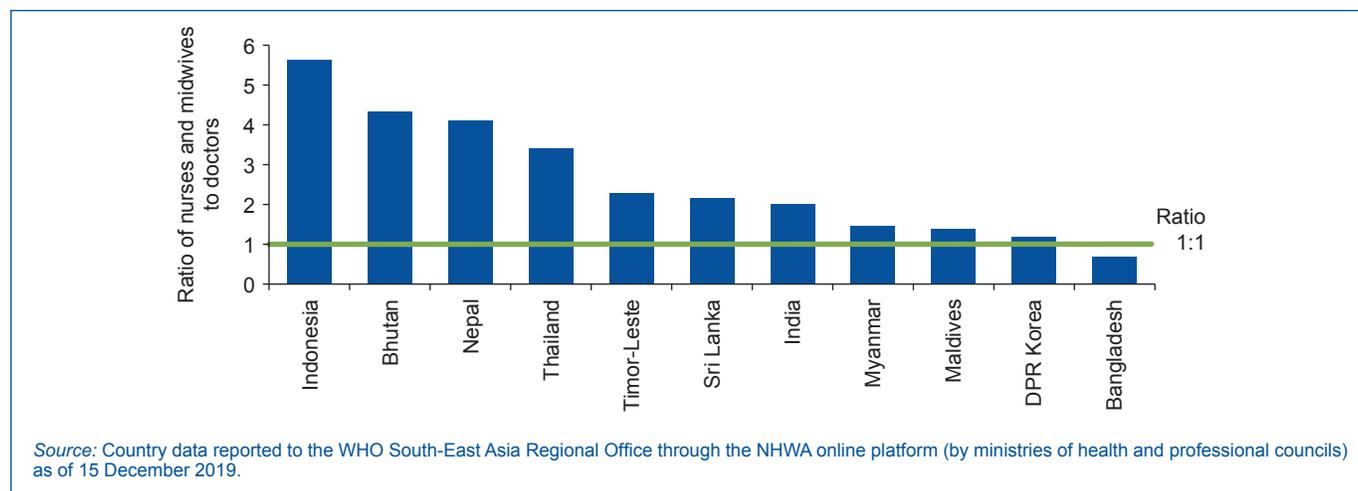


Fig. 3. Ratio of nurses and midwives to doctors in South-East Asia Region countries, 2018 (or latest year for which data are available)



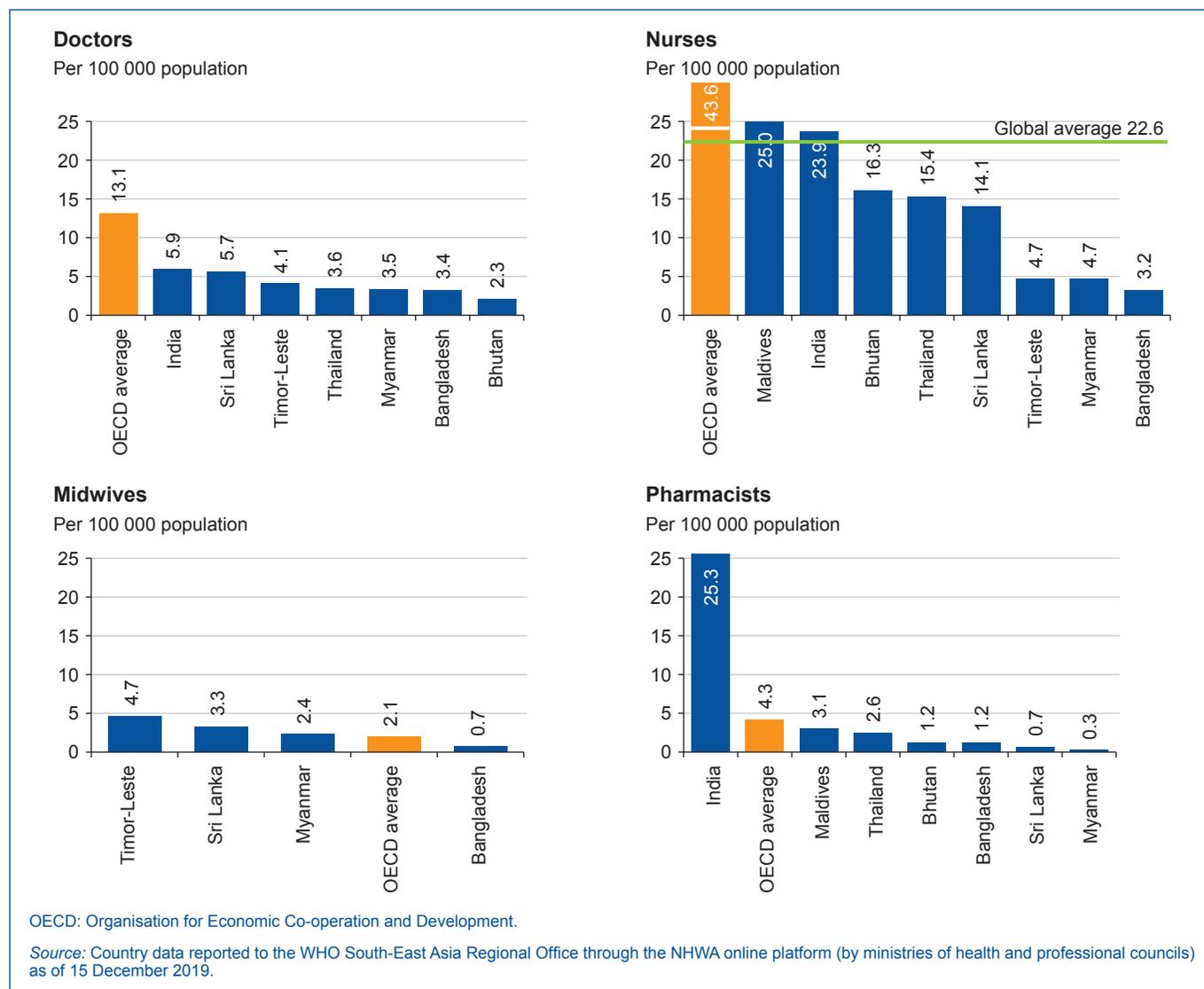
the region, from 3.2 to 25 graduates per 100 000 population (Fig. 4). Interestingly, the three countries with the lowest nursing densities (Bangladesh, Myanmar and Timor-Leste) also reported the lowest nursing graduate rates. The variation in the production of doctors is much smaller, ranging from 2.3 to 5.9 per 100 000 population. Compared with the OECD averages, South-East Asia Region countries' rates are much lower; they produce only one third the number of doctors per capita and one quarter the number of nurses per capita. Of the eight countries with a midwife cadre, four countries reported the number of midwifery graduates, of which three have a higher annual output of midwifery graduates than the OECD average (2.1 per 100 000).

The production of pharmacists varies by a factor of 10 across the region (Fig. 4), and that of dentists by a factor of five (data not shown). However, data for these two cadres are less reliable than those for doctors and nurses at present. India's high rate of producing pharmacists is partly explained by the country's inclusion of pharmaceutical technicians in the category of pharmacists.

Distribution and composition of the health workforce

Data on the distribution of health workers are limited, as most South-East Asia Region countries report disaggregated data only at the first subnational level, and not disaggregated by urban or rural, public or private, or type of health facility.

Fig. 4. Doctors, nurses, midwives and pharmacists graduating per 100 000 population in South-East Asia Region countries, 2018 (or latest year for which data are available)



In addition, data are not available on the distribution, age and sex of the other types of PHC workers beyond the five categories reported on here. Within countries, the subnational distribution by province/state remains unequal, with Sri Lanka having the lowest geographical variation (Fig. 5).

Overall, the South-East Asia Region has a young health workforce, with only 10% of medical doctors aged 55 years or older, compared with the 34% of medical doctors in OECD countries who are aged 55 years or older (Fig. 6).¹⁶ Only 6% of nurses in the region are aged 55 years or older, compared with the global average of 17% of nurses who are aged 55 years or older.¹⁰ This is a potential health workforce dividend for the region.

Except in Myanmar and Sri Lanka, doctors in the region are more likely to be male (Fig. 6). Nurses and pharmacists are predominantly female, with the exception of nurses in Timor Leste and pharmacists in Bhutan. Midwives are female in all four countries that reported disaggregated data. Five countries

out of eight that reported the data had more female than male dentists (data not shown in Fig. 6).

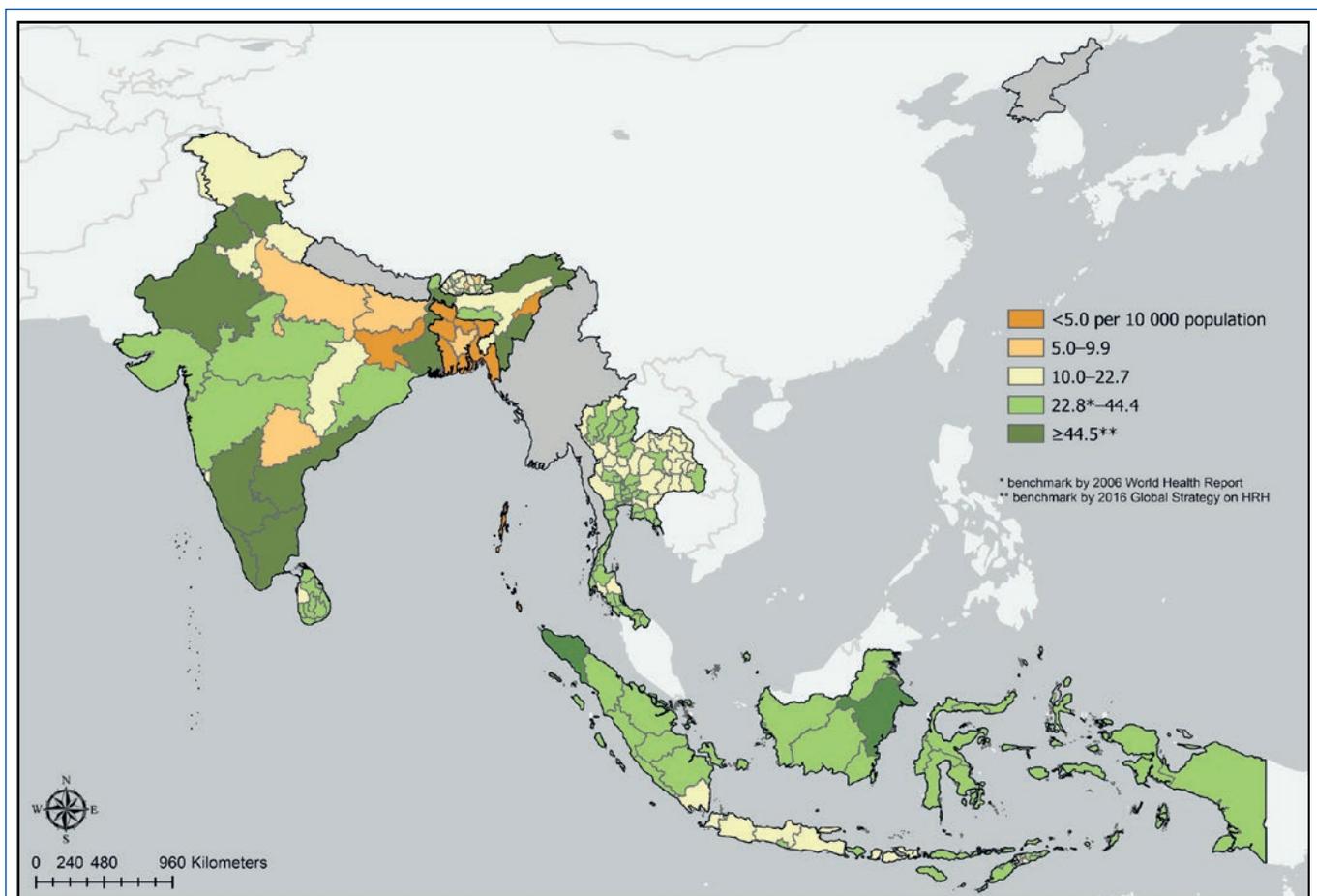
Health workforce policy: interventions by South-East Asia Region countries

During the first half of the Decade for Health Workforce Strengthening, countries reported taking action in the following four areas: health workforce governance, transformative education, rural retention and health workforce data. Transformative education and rural retention were the initial priority areas of the decade, followed by HRH governance and data.

Health workforce governance

Good HRH governance involves providing overall strategic direction for health workforce development through national HRH policies, strategies and plans, and managing intersectoral action, which is needed for progress on both transformative education and rural retention.

Fig. 5. Distribution of doctors, nurses and midwives by geographical area in South-East Asia Region countries (first subnational level), 2018 (or latest year for which data are available)



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HRH: human resources for health.

Source: Country data reported to the WHO South-East Asia Regional Office through the NHWA online platform (by ministries of health and professional councils) as of 15 December 2019.

Ten out of eleven countries of the region reported having HRH strategies that are up to date or in the process of revision.¹³ Most of these strategies are aligned with broader health services reforms. Four countries – Bangladesh, Nepal, Sri Lanka and Timor-Leste – have developed essential services packages, which define what services should be provided, where and by whom. Furthermore, the health workforce component, including availability and skill mix, has been explicitly prioritized and integrated into these essential services packages.

Health labour market analysis

Health labour market analysis generates evidence on the market dynamics of the health workforce. Analyzing factors affecting the demand for and supply of health workers to meet health needs, and forecasting future needs, can be valuable in informing policy decisions. Bangladesh, Sri Lanka and Chhattisgarh in India report that they use health labour market analysis to inform policy-making.^{17,18} This type of analysis has

helped these countries identify key bottlenecks and gaps in HRH supply and demand, as well as develop strategies to strengthen their health workforce situation.

New cadres and diversified skill mix for PHC

Countries have changed their existing skill mix, expanded roles and introduced new cadres of health workers to adapt to emerging health needs. Several countries have used mid-level health providers – health professionals who have received a shorter duration of training than a medical doctor – to expand access to PHC services. Evidence suggests that they can safely deliver the most essential health interventions if they are properly trained, supervised and supported.¹⁹ Bhutan, for example, has successfully deployed health assistants with 3 years of training to PHC centres. Their original responsibilities were predominantly maternal and child health services, and their role has now been expanded to cover screening and treatment of noncommunicable diseases. India has recently introduced community health officers to provide comprehensive

Fig. 6. Health workforce (doctors, nurses, midwives and pharmacists) composition in South-East Asia Region countries, by age and by sex, 2018 (or latest year for which data are available)



PHC services in new health and wellness centres. These community health officers have a bachelor of nursing, or are general nurse midwives or ayurveda practitioners who undergo a 6-month bridge course in public health and primary care.

Other countries have progressively introduced medical doctors as providers of preventive, promotive and curative primary care services, with a major emphasis on the first two. This includes medical doctors in Timor-Leste, “household” doctors in the Democratic People’s Republic of Korea, and “family” doctors in Indonesia, Maldives, Sri Lanka and Thailand.

Community health workers play an important role in providing PHC services at the community level across the region. These workers provide health promotion and preventive services – accredited social health activists in India, village health volunteers in Thailand, community health care providers in Bangladesh and female health volunteers in Nepal – and in some countries, such as India, they also provide certain essential curative services. In addition to providing promotive, preventive and curative services, community health workers are often key actors in community engagement and empowerment strategies, one of the key pillars of comprehensive PHC.

HRH unit: coordinating between stakeholders

The WHO *Global strategy on human resources for health* recommends the creation of HRH units as one way of strengthening HRH governance.⁷ Ten countries have an HRH unit within the ministry of health, compared with eight in 2018.²⁰ Myanmar and Thailand have recently established new HRH units with the technical support of WHO. HRH units cover a wide range of functions, from the strategic to the more administrative. A 2018 survey found that only 14% of staff in HRH units are professionals, limiting their capacity to play a more strategic and effective role.²⁰ While Indonesia has an established, well-resourced HRH unit that plays a central role in coordinating the country’s HRH agenda, over the past 2 years, the HRH units in Bangladesh, India and Sri Lanka have expanded their technical staff along with their range of functions, to include support strategy development, and coordination and monitoring of HRH strategy implementation. In Sri Lanka, the HRH unit has helped to shorten recruitment times from 18 months to 3 months, which in turn has helped to reduce staff shortages.¹³

Transformative health professional education

Transformative education means changing how health professionals are educated in order to equip and enable them to better respond to people’s health needs. It involves changes in both institutional design, which specifies the structure and functions of the education system, and instructional design, which focuses on processes. In 2013, WHO developed guidance on transformative education.^{13,21,22}

Countries of the South-East Asia Region have made progress on different components of transformative education, including accreditation and regulation of health professional training institutions, use of modern information technologies in pre-service education, continuing professional development (CPD), faculty development, curriculum adaptation and use of interprofessional education.

Most countries have mechanisms for accreditation of health professional education. However, there are considerable differences between countries in how accreditation is defined

and implemented. For example, Indonesia and Thailand have well-established accreditation systems, with their accreditation agencies recognized in 2018 by the World Federation of Medical Education. Other countries, such as India, are progressively improving their accreditation systems. India has brought forth major regulatory change in health professional education: the 2018 Allied Health Professional Bill, which seeks to regulate and standardize the education and practice of allied and health care professionals, and is currently in Parliament for approval, and the National Medical Commission (NMC) Bill, passed by parliament in 2019, which introduces an NMC-administered national licensing examination for physicians. The Democratic People’s Republic of Korea has also initiated reforms in the regulation of medical education, with the technical support of WHO.

Most countries have national standards for CPD. However, more research is needed to better understand the situation with regard to CPD systems in South-East Asia Region countries, such as their content, effectiveness and status, as a requirement for relicensing. Recently, the WHO South-East Asia Region has received ethical clearance to conduct a regional study on CPD.²⁰

Interprofessional education, an educational approach to preparing students from different health professional backgrounds to work collaboratively to provide comprehensive health services, has been hard to advance in practice, although there are examples from Indonesia, Myanmar and Thailand.¹³

Rural retention

In 2019, following the framework of the 2010 WHO recommendations on rural retention, six country case studies were conducted on rural retention of health workers in Bhutan, India (Chhattisgarh State), Indonesia, Myanmar, Sri Lanka and Thailand.^{23,24} Findings from the case studies showed that, while limited data are available to assess and monitor the impact of rural retention policies, rural retention is still a high government priority for all countries and that good practices in policy development and implementation exist.²⁵ For example, in 2020, Myanmar approved a national strategy on rural retention. The case studies found that countries with the most successful rural retention implemented bundles of interventions that include educational and regulatory interventions, financial incentives and, to a lesser extent, professional support, with the most common interventions being educational and financial incentives.²⁵ Examples of countries improving the availability and distribution of health workers in rural areas include health assistants in Bhutan, medical doctors in Thailand, and medical doctors and specialists in Chhattisgarh, India.²³ Although progress has been made on rural retention, there is no room for complacency. Countries need to continue prioritizing the planning and implementation of rural retention policies to improve the availability and distribution of health workers in rural areas and strengthen their impact assessments.

Health workforce data: a new frontier in health workforce planning

The Decade for Health Workforce Strengthening has resulted in improved quantity and quality of health workforce data.¹³ In 2017, the South-East Asia Regional Office organized a regional conference on “Improving the generation and use of HRH data”, at which countries agreed on 14 core indicators to

report regionally on a yearly basis through the NHWA platform to help monitor progress on their HRH situations and inform decision-making.²⁶ Through WHO guidance on the NHWA platform and new information technologies, countries have strengthened their HRH information systems and their ability to collect, monitor, report and act on these important indicators.

For example, Maldives launched its new HRH information system in 2019, which integrates health workforce data from different ministries. Nepal has digitalized data from all professional councils and linked them to the HRH information system of the Ministry of Health. Timor-Leste has conducted an assessment of its health workforce information system to inform its current development of an HRH registry. Bangladesh has established in its Human Resources Development Unit a central human resource information system to capture health workforce data from the public sector.

An increasing number of countries of the region are making more evidence-based decisions on staffing through the Workload Indicators of Staffing Norms management tool. This tool helps district and national managers identify the needs for different cadres of health workers based on the reported health facility workload. It is primarily used in PHC facilities, playing an important role in efficiently allocating scarce health workers. The tool is also used to inform reviews of national staffing norms. The investments in strengthening HRH data have paid dividends, but more efforts are required to further improve HRH data to inform planning, monitoring and policy-making.

Discussion

Health workforce and PHC workforce: progress, challenges and way forward in South-East Asia

Even before the impact of the COVID-19 pandemic, epidemiological and demographic transitions, plus the rapid urbanization experienced across the South-East Asia Region, were changing population health needs, requiring the adaptation of PHC services to respond to them.

Historically, PHC services and the health workforce in the region have been focused on delivering maternal and child health services, with limited attention to noncommunicable diseases and other acute pathologies.²⁷ Furthermore, in most countries of the region, PHC has not been well equipped for critical public health functions, notably surveillance and rapid response to health threats. Very often the quality of PHC services has been suboptimal, owing in part to the shortage, maldistribution, inadequate training and poor performance of PHC workers, and the insufficient budget allocated to HRH.

Since the Decade for Health Workforce Strengthening started, countries have tried to adapt PHC services and the PHC workforce progressively to the evolving health context. Overall, the availability of doctors, nurses and midwives in the region has increased by 21% and 9 out of 11 countries have passed the threshold of 22.8 doctors, nurses and midwives per 10 000 population. The distribution of health workers in rural areas has improved in some countries, in part as a consequence of the implementation of a bundle of policy interventions to address rural retention. The health workforce skill mix has been revisited in some countries, giving greater importance to mid-level providers, while introducing more

medical doctors in others. Several countries have increased the roles of community health workers in providing PHC services at community level.

Despite the past 5 years' progress on HRH governance, health workforce data and various other dimensions of the health workforce, the region cannot be complacent, as the following protracted challenges in the health workforce and PHC remain.

Continued shortage of health workers. Only two countries have passed the new SDG threshold of 44.5 doctors, nurses and midwives per 10 000 population.

Maldistribution of health workers. Reasons for the inefficient and inequitable distribution of the health workforce are threefold. First, the urban/rural unequal distribution continues, with low availability of health workers in rural areas and in poor and marginalized urban areas. Second, the geographical distribution tends to favour central regions, which have much higher health workforce availability. Third, while data on the private sector are often weak, the existing evidence points to a substantial proportion of the health workforce working in the private sector.

Inadequate PHC skill mix to respond to changing population needs. Several countries continue to focus on doctors as the primary PHC service providers providing curative services as opposed to preventive and promotive services. In addition, not enough effort is put into enhancing the roles and capacities of other professionals, such as nurses, midwives, mid-level health workers and community health workers, as key providers of comprehensive primary care services. Furthermore, countries pay minimal attention to addressing the social determinants of health through multisectoral actions and citizen empowerment.²⁸

Substandard working conditions. Inadequate investment in PHC leading to poor work environments, low salaries and lack of supervision for PHC health workers remains a challenge in some South-East Asia Region countries.

Low quality of health professional education. The quality of pre-service education remains low in some countries, with health curriculums not adapted to the evolving health needs of the population, and with limited implementation of CPD and interprofessional education. Furthermore, some countries have weak accreditation and regulatory systems.

Gaps in HRH data. Data on the health workforce continue to be fragmented and of poor quality, and there is limited disaggregation of data by service delivery level, urban or rural services, or private or public sector, and for PHC health professionals beyond the five categories of doctors, nurses, midwives, dentists and pharmacists. There are issues relating to ensuring data security. Furthermore, the NHWA platform requires continued strengthening and support.

Weak HRH governance. HRH governance continues to have fragmented oversight, planning and management. The primary focus for health workforce governance is still on administrative functions. The capacity of ministry of health senior policy-makers and HRH technical staff to pursue more robust technical and strategic planning approaches needs strengthening.

COVID-19 has exponentially increased the stress on an already overstretched PHC workforce. PHC workers are playing a critical role in containing and responding to the pandemic, while maintaining essential health services such

as immunization and tuberculosis control. PHC workers will also play a critical role in administering COVID-19 vaccines to hundreds of millions of people in the region. However, often they are not well protected from the virus and they suffer from increasing mental stress and exhaustion. Addressing these challenges, which have been magnified by the COVID-19 pandemic, will require extra commitment and prioritization by governments.

COVID-19 also provides a policy window of opportunity to increase the necessary long-term and sustained investment in the health workforce and to accelerate pending reforms in the South-East Asia Region. For example, the COVID-19 pandemic is catalysing short-term changes in education and training that merit longer-term adoption, such as more long-distance education through greater use of information technologies. It is also creating new needs and opportunities to accelerate progress on HRH governance.

Government budget restrictions may play against these reforms, but, now more than ever in the context of COVID-19, countries have a strong argument for prioritizing the health agenda and, within it, the health workforce agenda.

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References

1. The world health report 2008: primary health care now more than ever. Geneva: World Health Organization; 2008.
2. The world health report 2006: working together for health. Geneva: World Health Organization; 2006.
3. Strengthening human resource for health in South-East Asia: time for action and commitment – report of a regional meeting, Thimphu, Bhutan, 19–21 November 2014. New Delhi: World Health Organization Regional Office for South-East Asia; 2014.
4. Resolution of the WHO Regional Committee for South-East Asia SEA/RC67/R6. Strengthening health workforce education and training in the region. New Delhi: World Health Organization Regional Office for South-East Asia; 2014.
5. Introduction to the Regional Director's annual report on the work of WHO in the South-East Asia Region covering the period 1 January–31 December 2014. New Delhi: World Health Organization Regional Office for South-East Asia; 2015.
6. Transforming our world: the 2030 Agenda for Sustainable Development. New York: United Nations; 2015 (A/RES/70/1; <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>, accessed 13 January 2021).
7. Global strategy on human resources for health: workforce 2030. Geneva: World Health Organization; 2016.
8. High-Level Commission on Health Employment and Economic Growth: report of the expert group. Geneva: World Health Organization; 2016.
9. Declaration of Astana, Global Conference on Primary Health Care, 25–26 October 2018 (<https://www.who.int/primary-health/conference-phc/declaration>, accessed 23 December 2020).
10. State of the world's nursing 2020: investing in education, jobs and leadership. Geneva: World Health Organization; 2020.
11. Strengthening human resources for health in the South-East Asia Region: first progress report on the Decade of strengthening human resources for health in SEAR 2015–2024. New Delhi and Nonthaburi, Thailand: World Health Organization Regional Office for South-East Asia and International Health Policy Programme, Thailand; 2016.
12. Decade for health workforce strengthening in the South-East Asia Region 2015–2024: second review of progress, 2018. New Delhi: World Health Organization Regional Office for South-East Asia; 2018.
13. The decade for health workforce strengthening in the SEA Region 2015–2024: mid-term review of progress, 2020. New Delhi: World Health Organization Regional Office for South-East Asia; 2020.
14. National Health Workforce Accounts: a handbook. Geneva: World Health Organization; 2017.

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15. International Labour Organization. International Standard Classification of Occupations 2008 (ISCO-08): structure, group definitions and correspondence tables. Geneva: International Labour Office; 2012.
16. Health at a glance 2019: OECD indicators. Paris: OECD Publishing; 2019.
17. Health labour market analysis: Sri Lanka. Colombo: World Health Organization Country Office for Sri Lanka; 2017.
18. Health labour market analysis: Chhattisgarh. New Delhi: World Health Organization Country Office for India; 2020.
19. Mid-level health workers: a review of the evidence. UHC technical brief. New Delhi: World Health Organization Regional Office for South-East Asia; 2017.
20. Cometto G, Nartey E, Zapata T, Kanda M, Md Y, Narayan K, et al. Analysing public sector institutional capacity for health workforce governance in the South-East Asia region of WHO. *Hum Resour Health*. 2019;17(1):43. <https://doi.org/10.1186/s12960-019-0385-1> PMID:31215442
21. Frenk J, Chen L, Bhutta ZA, Cohen J, Crisp N, Evans T, et al. Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. *Lancet*. 2010;376(9756):1923–58. [https://doi.org/10.1016/s0140-6736\(10\)61854-5](https://doi.org/10.1016/s0140-6736(10)61854-5) PMID:21112623
22. Transforming and scaling up health professionals' education and training: World Health Organization guidelines 2013. Geneva: World Health Organization; 2013.
23. Improving retention of health workers in rural and remote areas: case studies from WHO South-East Asia Region. New Delhi: World Health Organization Regional Office for South-East Asia; 2020.
24. Increasing access to health workers in remote and rural areas through improved retention: global policy recommendations. Geneva: World Health Organization; 2010.
25. Zapata T, Buchan J, Tangcharoensathien V, Meliala A, Karunathilake I, Tin N, et al. Rural retention strategies in the South-East Asia Region: evidence to guide effective implementation. *Bull World Health Organ*. 2020;98(11):815–17. <https://doi.org/10.2471/blt.19.245662> PMID:33177780
26. Improving the generation and use of HRH data in SEAR: regional workshop – summary report, 23–25 September 2017, New Delhi, India. New Delhi: World Health Organization Regional Office for South-East Asia; 2017.
27. Primary health care at forty: reflections from South-East Asia. New Delhi: World Health Organization Regional Office for South-East Asia; 2018.
28. Chotchoungchatchai S, Marshall AI, Witthayapipopsakul W, Panichkriangkrai W, Patcharanarumol W, Tangcharoensathien V. Primary health care and sustainable development goals. *Bull World Health Organ*. 2020;98(11):792–800. <https://doi.org/10.2471/blt.19.245613> PMID:33177776