STATE OF THE
WORLD'S
NURSING

2020

Investing in education, jobs and leadership

World Health Organization

International Council of Nurses

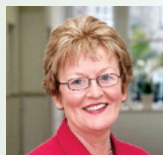Nursing now

Investment in nurses
will contribute not only to health-related SDG targets, but also to education (SDG 4), gender (SDG 5), decent work and economic growth (SDG 8).

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The *State of the world's nursing 2020: investing in education, jobs and leadership* comes as the world witnesses unprecedented political commitment to universal health coverage. At the same time, our emergency preparedness and response capacity is being tested by the current COVID-19 outbreak and mass population displacement caused by conflict. Nurses provide vital care in each of these circumstances. Now, more than ever, the world needs them working to the full extent of their education and training.

This first *State of the world's nursing* report reveals much to celebrate about the nursing workforce. Opportunities for advanced nursing education and enhanced professional roles, including at the policy level, can drive improvements in population health. At the same time, we continue to see vast inequities in the distribution of nurses around the world which we must address.

2020 is the International Year of the Nurse and the Midwife. This is an opportunity to leverage the evidence in the *State of the world's nursing 2020* report and commit to an agenda that will drive and sustain progress to 2030. To this end, we urge governments and all relevant stakeholders to:

• invest in the massive acceleration of nursing **education** – faculty, infrastructure and students – to address global needs, meet domestic demand, and respond to changing technologies and advancing models of integrated health and social care;

• create at least 6 million new nursing **jobs** by 2030, primarily in low- and middle-income countries, to offset the projected shortages and redress the inequitable distribution of nurses across the world;

• strengthen nurse **leadership** – both current and future leaders – to ensure that nurses have an influential role in health policy formulation and decision-making, and contribute to the effectiveness of health and social care systems.

All countries can take action in support of this agenda. Most countries can accomplish these actions with their own resources. For countries requiring assistance by the international community, we must direct a growing share of human capital investments into the health and social care economy. Such investments will also drive progress across the Sustainable Development Goals, with dividends for gender equity, women's economic empowerment and youth employment.

Let us seize this opportunity to commit to a decade of action that begins with investing in nursing education, jobs and leadership.

Central role of nurses in achieving universal health coverage and the Sustainable Development Goals

Nurses are critical to deliver on the promise of "leaving no one behind" and the global effort to achieve the Sustainable Development Goals (SDGs). They make a central contribution to national and global targets related to a range of health priorities, including universal health coverage, mental health and noncommunicable diseases, emergency preparedness and response, patient safety, and the delivery of integrated, people-centred care.

No global health agenda can be realized without concerted and sustained efforts to maximize the contributions of the nursing workforce and their roles within interprofessional health teams. To do so requires policy interventions that enable them to have maximum impact and effectiveness by optimizing nurses' scope and leadership, alongside accelerated investment in their education, skills and jobs. Such investments will also contribute to the SDG targets related to education, gender, decent work and inclusive economic growth.

This *State of the world's nursing 2020* report, developed by the World Health Organization (WHO) in partnership with the International Council of Nurses and the global Nursing Now campaign, and with the support of governments and wider partners, provides a compelling case on the value of the nursing workforce globally.

Nursing is the largest occupational group in the health sector, accounting for approximately

59%

of the health professions.

Current status of evidence in 2020

The nursing workforce is expanding in size and professional scope. However, the expansion is not equitable, is insufficient to meet rising demand, and is leaving some populations behind.

191 countries provided data for this report, an all-time high and a 53% increase compared to 2018 data availability. Around 80% of countries reported on 15 indicators or more. However, there are significant gaps in data on education capacity, financing, salary and wages, and health labour market flows. This impedes the ability to conduct health labour market analyses that will inform nursing workforce policy and investment decisions.

The global nursing workforce is 27.9 million, of which 19.3 million are professional nurses. This indicates an increase of 4.7 million in the total stock over the period 2013–2018, and confirms that nursing is the largest occupational group in the health sector, accounting for approximately 59% of the health professions. The 27.9 million nursing personnel include 19.3 million (69%) professional nurses, 6.0 million (22%) associate professional nurses and 2.6 million (9%) who are not classified either way.

The world does not have a global nursing workforce commensurate with the universal health coverage and SDG targets. Over 80% of the world's nurses are found in countries that account for half of the world's population. The global shortage of nurses, estimated to be 6.6 million in 2016, had decreased slightly to 5.9 million nurses in 2018. An estimated 5.3 million (89%) of that shortage is concentrated in low- and lower middle-income countries, where the growth in the number of nurses is barely keeping pace with population growth, improving only marginally the nurse-to-population density levels. Figure 1 illustrates the wide variation in density of nursing personnel to population, with the greatest gaps in countries in the African, South-East Asia and Eastern Mediterranean regions and some countries in Latin America.

Figure 1   **Density of nursing personnel per 10 000 population in 2018**

■ < 10   ■ 10 to 19   ■ 20 to 29   ■ 30 to 39   ■ 40 to 49   ■ 50 to 74   ■ 75 to 99   ■ 100 +
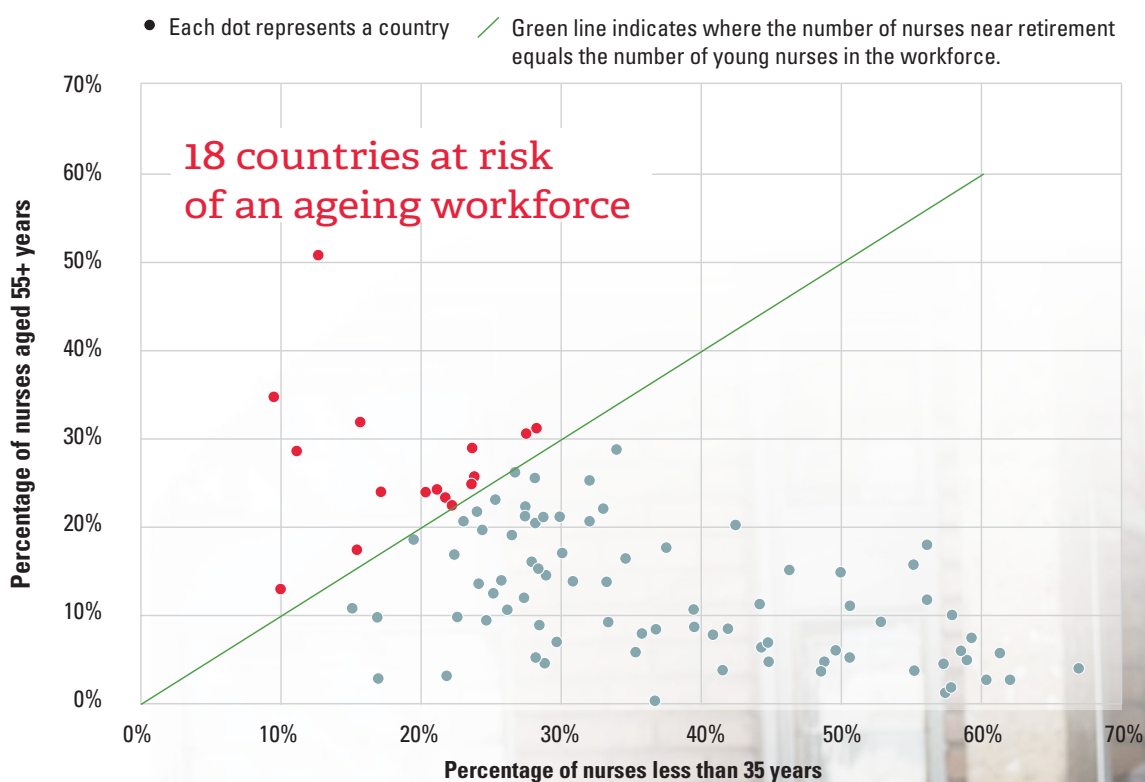■ not applicable   ■ not reported
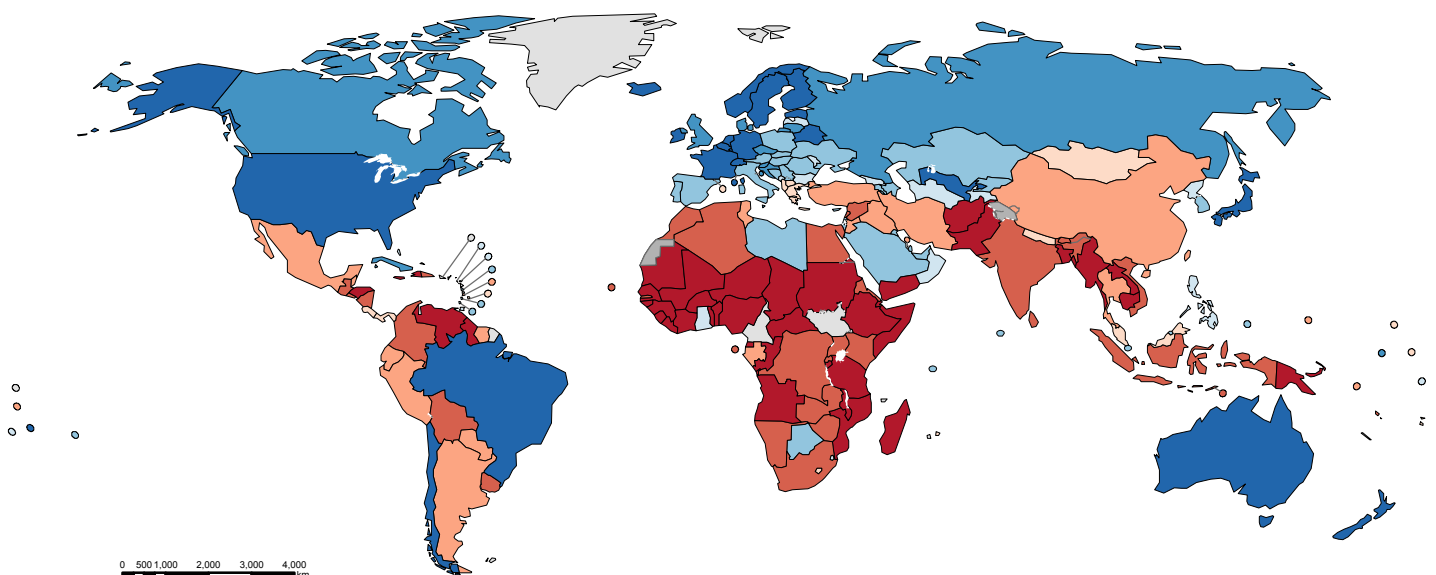
Includes nursing professionals and associates.
Source: National Health Workforce Accounts, World Health Organization 2019. Latest available data over the period 2013–2018.

Ageing health workforce patterns in some regions threaten the stability of the nursing stock. Globally, the nursing workforce is relatively young, but there are disparities across regions, with substantially older age structures in the American and European regions. Countries with lower numbers of early career nurses (aged under 35 years) as a proportion of those approaching retirement (aged 55 years and over) will have to increase graduate numbers and strengthen retention packages to maintain access to health services. Countries with a young nursing workforce should enhance their equitable distribution across the country. As shown in Figure 2, countries with higher proportions of nurses nearing retirement compared to young nurses (the countries above the green line) will face future challenges in maintaining the nursing workforce.

Figure 2   **Relative proportions of nurses aged over 55 years and below 35 years (selected countries)**
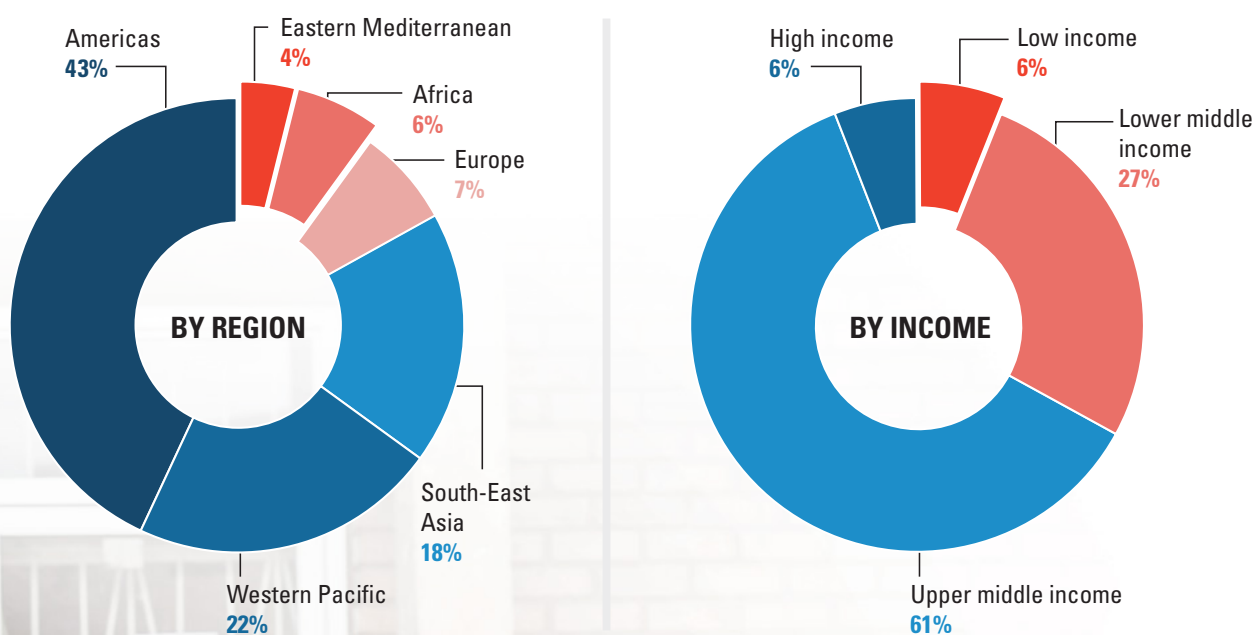

Includes nursing professionals and nursing associate professionals.
Source: National Health Workforce Accounts, World Health Organization 2019. Latest available data reported between 2013 and 2018.

To address the shortage by 2030 in all countries, the total number of nurse graduates would need to increase by 8% per year on average, alongside an improved capacity to employ and retain these graduates. Without this increase, current trends indicate 36 million nurses by 2030, leaving a projected needs-based shortage of 5.7 million, primarily in the African, South-East Asia and Eastern Mediterranean regions. In parallel, a number of countries in the American, European and Western Pacific regions would still be challenged with nationally defined shortages. Figure 3 shows projected increases in numbers of nurses by WHO region and by country income group.

Figure 3   **Projected increase (to 2030) of nursing stock, by WHO region and by country income group**

BY REGION

- Americas **43%**
- Eastern Mediterranean **4%**
- Africa **6%**
- Europe **7%**
- South-East Asia **18%**
- Western Pacific **22%**

BY INCOME

- High income **6%**
- Low income **6%**
- Lower middle income **27%**
- Upper middle income **61%**

Includes nursing professionals and nursing associate professionals.

While the patterns are evolving, equitable distribution and retention of nurses is a **NEAR-UNIVERSAL CHALLENGE.**

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Figure 4 **Average duration (years) of education for nursing professionals, by WHO region**
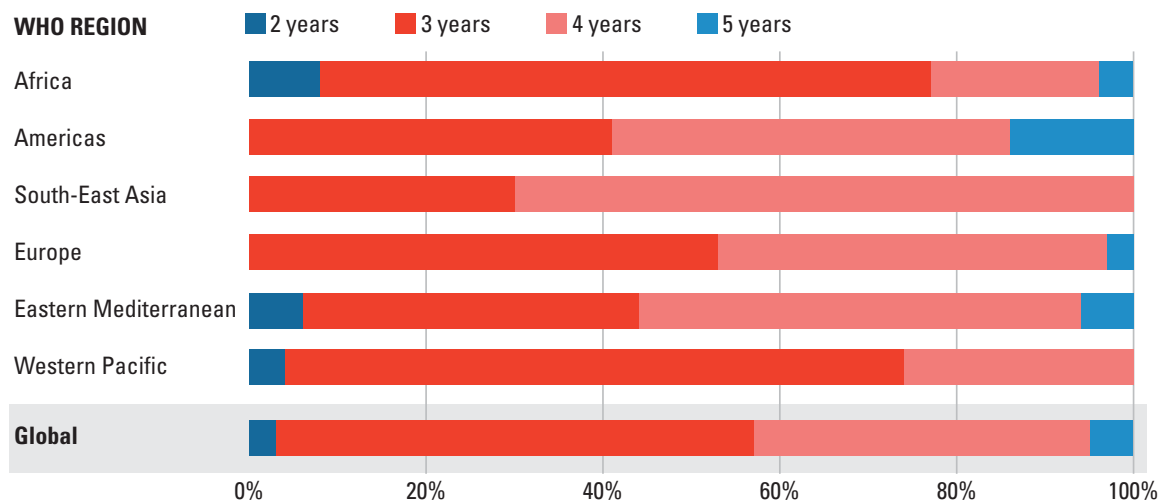
WHO REGION   ■ 2 years ■ 3 years ■ 4 years ■ 5 years

Africa

Americas

South-East Asia

Europe

Eastern Mediterranean

Western Pacific

Global

0%   20%   40%   60%   80%   100%

The majority of countries (152 out of 157 responding; 97%) reported that the minimum duration for nurse education is a three-year programme. A large majority of countries reported standards for education content and duration (91%), accreditation mechanisms (89%), national standards for faculty qualifications (77%) and interprofessional education (67%). However, less is known about the effectiveness of these policies and mechanisms. Further, there is still considerable variety in the minimum education and training levels of nurses, alongside capacity constraints such as faculty shortages, infrastructure limitations and the availability of clinical placement sites. As shown in Figure 4, the duration of nursing education is predominantly three or four years globally.

A total of 78 countries (53% of those providing a response) reported having advanced practice roles for nurses. There is strong evidence that advanced practice nurses can increase access to primary health care in rural communities and address disparities in access to care for vulnerable populations in urban settings. Nurses at all levels, when enabled and supported to work to the full scope of their education and training, can provide effective primary and preventive health care, amongst many other health services that are instrumental to achieving universal health coverage.

One nurse out of every eight practises in a country other than the one where they were born or trained. The international mobility of the nursing workforce is increasing. While the patterns are evolving, equitable distribution and retention of nurses is a near-universal challenge. Unmanaged migration
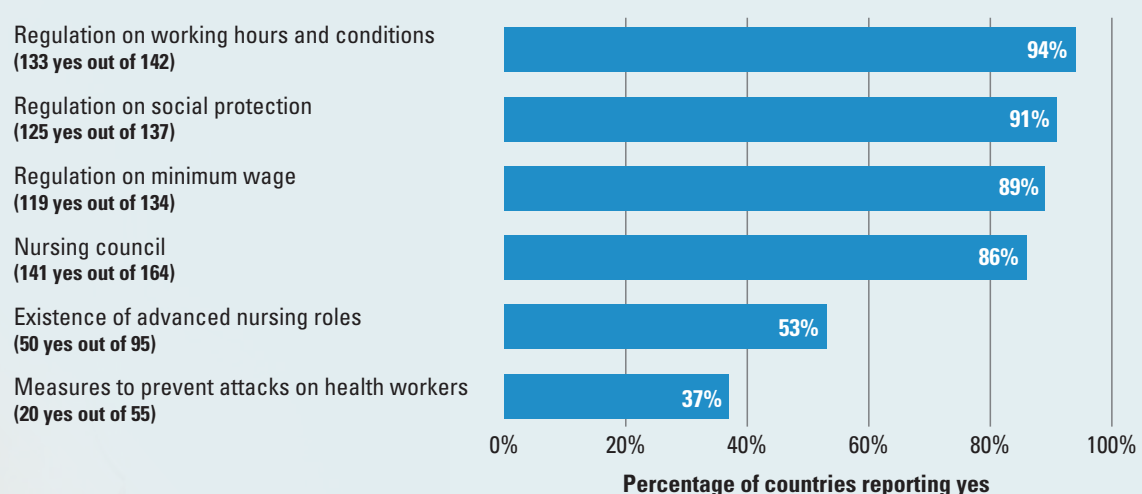
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can exacerbate shortages and contribute to inequitable access to health services. Many high-income countries in different regions appear to have an excessive reliance on international nursing mobility due to low numbers of graduate nurses or existing shortages vis-à-vis the number of nursing jobs available and the ability to employ new graduate nurses in the health system.

Most countries (86%) have a body responsible for the regulation of nursing. Almost two thirds (64%) of countries require an initial competency assessment to enter nursing practice and almost three quarters (73%) require continued professional development for nurses to continue practising. However, the regulation of nursing education and practice is not harmonized beyond a few subregional mutual recognition arrangements. Regulatory bodies are challenged to keep education and practice regulations updated and nursing workforce registries current in a highly mobile, team-based and digital era. Figure 5 shows the proportions of reporting countries with regulatory provisions on working conditions in place.

Nursing remains a highly gendered profession with associated biases in the workplace. Approximately 90% of the nursing workforce is female, but few leadership positions in health are held by nurses or women. There is some evidence of a gender-based pay gap, as well as other forms of gender-based discrimination in the work environment. Legal protections, including working hours and conditions, minimum wage, and social protection, were reported to be in place in most countries, but not equitably across regions. Just over a third of countries (37%) reported measures in place to prevent attacks on health workers.

A total of 82 out of 115 responding countries (71%) reported having a national nursing leadership position with responsibility for providing input into nursing and health policy. A national nursing leadership development programme was in place in 78 countries (53% of those responding). Both the presence of a government chief nursing officer (or equivalent) position and the existence of a nursing leadership programme are associated with a stronger regulatory environment for nursing.

Figure 5   **Percentage of countries with regulatory provisions on working conditions**

Regulation on working hours and conditions (133 yes out of 142): 94%
Regulation on social protection (125 yes out of 137): 91%
Regulation on minimum wage (119 yes out of 134): 89%
Nursing council (141 yes out of 164): 86%
Existence of advanced nursing roles (50 yes out of 95): 53%
Measures to prevent attacks on health workers (20 yes out of 55): 37%

Percentage of countries reporting yes

Source: National Health Workforce Accounts, World Health Organization 2019.

Future directions for nursing workforce policy

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1 **Countries affected by shortages will need to increase funding to educate and employ at least 5.9 million additional nurses.** Additional investments in nursing education are estimated to be in the range of US$ 10 per capita in low- and middle-income countries. Further investments would be required to employ nurses upon graduation. In most countries this can be achieved with domestic funds. Actions include review and management of national wage bills and, in some countries, lifting restrictions on the supply of nurses. Where domestic resources are constrained in the medium and long term, for example in low-income countries and conflict-affected or vulnerable contexts, mechanisms such as institutional fund-pooling arrangements should be considered. Development partners and international financing institutions can help by transferring human capital investments for education, employment, gender, health and skills development into national health workforce strategies for advancing primary health care and achieving universal health coverage. Investments in the nursing workforce can also help drive progress in job creation, gender equity and youth engagement.

2 **Countries should strengthen capacity for health workforce data collection, analysis and use.** Actions required include accelerating the implementation of National Health Workforce Accounts and using the data for health labour market analyses to guide policy development and investment decisions. Collation of nursing data will require participation across government bodies, as well as engagement of key stakeholders such as the regulatory councils, nursing education institutions, health service providers and professional associations.

3 **Nurse mobility and migration must be effectively monitored and responsibly and ethically managed.** Actions needed include reinforcement of the implementation of the WHO Global Code of Practice on the International Recruitment of Health Personnel by countries, recruiters and international stakeholders. Partnerships and collaboration with regulatory bodies, health workforce information systems, employers, government ministries and other stakeholders can improve the ability to monitor, govern and regulate international nurse mobility. Countries that are overreliant on migrant nurses should aim towards greater self-sufficiency by investing more in domestic production of nurses. Countries experiencing excessive losses of their nursing workforce through out-migration should consider mitigating measures and retention packages, such as improving salaries (and pay equity) and working conditions, creating professional development opportunities, and allowing nurses to work to their full scope of education and training.

4 **Nurse education and training programmes must graduate nurses who drive progress in primary health care and universal health coverage.** Actions include investment in nursing faculty, availability of clinical placement sites and accessibility of programmes offered to attract a diverse student body. Nursing should emerge as a career choice grounded in science, technology, teamwork and health equity. Government chief nurses and other national stakeholders can lead national dialogue on the appropriate entry-level and specialization programmes for nurses to ensure there is adequate supply to meet health system demand for graduates. Curricula must be aligned with national health priorities as well as emerging global issues to prepare nurses to work effectively in interprofessional teams and maximize graduate competencies in health technology.

5 **Nursing leadership and governance is critical to nursing workforce strengthening.** Actions include establishing and supporting the role of a senior nurse in the government responsible for strengthening the national nursing workforce and contributing to health policy decisions. Government chief nurses should drive efforts to strengthen nursing workforce data and lead policy dialogue that results in evidenced-based decision-making on investment in the nursing workforce. Leadership programmes should be in place or organized to nurture leadership development in young nurses. Fragile and conflict-affected settings will typically require a particular focus in order to (re)build the institutional foundations and individual capacity for effective nursing workforce governance and stewardship.

6 **Planners and regulators should optimize the contributions of nursing practice.** Actions include ensuring that nurses in primary health care teams are working to their full scope of practice. Effective nurse-led models of care should be expanded when appropriate to meet population health needs and improve access to primary health care, including a growing demand related to noncommunicable diseases and the integration of health and social care. Workplace policies must address the issues known to impact nurse retention in practice settings; this includes the support required for nurse-led models of care and advanced practice roles, leveraging opportunities arising from digital health technology and taking into account ageing patterns within the nursing workforce.

7 **Policy-makers, employers and regulators should coordinate actions in support of decent work.** Countries must provide an enabling environment for nursing practice to improve attraction, deployment, retention and motivation of the nursing workforce. Adequate staffing levels and workplace and occupational health and safety must be prioritized and enforced, with special efforts paid to nurses operating in fragile, conflict-affected and vulnerable settings. Remuneration should be fair and adequate to attract, retain and motivate nurses. Further, countries should prioritize and enforce policies to address and respond to sexual harassment, violence and discrimination within nursing.

8 **Countries should deliberately plan for gender-sensitive nursing workforce policies.** Actions include implementing an equitable and gender-neutral system of remuneration among health workers, and ensuring that policies and laws addressing the gender pay gap apply to the private sector as well. Gender considerations should inform nursing policies across the education, practice, regulatory and leadership functions, taking account of the fact that the nursing workforce is still predominantly female (Figure 6). Policy considerations should include enabling work environments for women, for example through flexible and manageable working hours that accommodate the changing needs of nurses as women, and gender-transformative leadership development opportunities for women in the nursing workforce.

Figure 6 **Percentage of female and male nursing personnel, by WHO region**
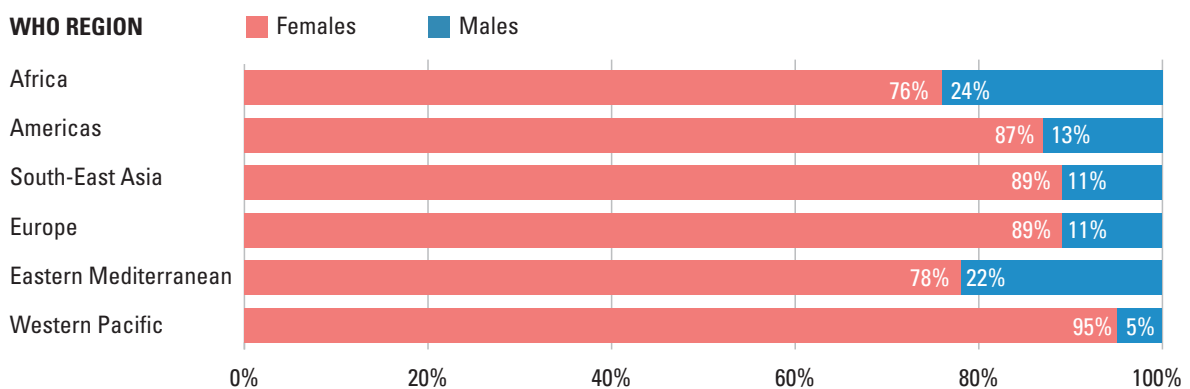
Source: National Health Workforce Accounts, World Health Organization 2019. Latest available data reported between 2013 and 2018.

Workplace policies must address the issues known to impact nurse retention in practice settings; this includes the support required for nurse-led models of care and advanced practice roles.

9   **Professional nursing regulation must be modernized.** Actions include harmonizing nursing education and credentialing standards, instituting mutual recognition of nursing education and professional credentials, and developing interoperable systems that allow regulators to easily and quickly verify nurses' credentials and disciplinary history. Regulatory frameworks, including scope of practice, initial competency assessments and requirements for continuous professional development, should facilitate nurses working to the full scope of their education and training in dynamic interprofessional teams.

10   **Collaboration is key.** Actions include intersectoral dialogue led by ministries of health and government chief nurses, and engaging other relevant ministries (such as education, immigration, finance, labour) and stakeholders from the public and private sectors. A key element is to strengthen capacity for effective public policy stewardship so that private sector investments, educational capacity and nurses' roles in health service provision can be optimized and aligned to public policy goals. Professional nursing associations, education institutions and educators, nursing regulatory bodies and unions, nursing student and youth groups, grass-roots groups, and global campaigns such as Nursing Now are valuable contributors to strengthening the role of nursing in care teams working to achieve population health priorities.

Investing in education, jobs and leadership

This report has provided robust data and evidence on the nursing workforce. This intelligence is needed to support policy dialogue and facilitate decision-making to invest in nursing to strengthen primary health care, achieve universal health coverage, and advance towards the SDGs.

Despite signs of progress, the report has also highlighted key areas of concern. An acceleration of progress will be required in many low- and lower middle-income countries in the African, South-East Asia and Eastern Mediterranean regions in order to address key gaps. However, there is no room for complacency in upper middle- and high-income countries, where constrained supply capacity, an older age structure of the nursing workforce and an overreliance on international recruitment jointly pose a threat to the attainment of national nursing workforce requirements.

National governments, with support where relevant from their domestic and international partners, should catalyse and lead an acceleration of efforts to:

▶ **build leadership, stewardship and management capacity for the nursing workforce** to advance the relevant education, health, employment and gender agendas;

▶ **optimize return on current investments in nursing through adoption of required policy options** in education, decent work, fair remuneration, deployment, practice, productivity, regulation and retention of the nursing workforce;

▶ **accelerate and sustain additional investment in nursing education, skills and jobs.**

The investments required will necessitate additional financial resources. If these are made available, the returns for societies and economies can be measured in terms of improved health outcomes for billions of people, creation of millions of qualified employment opportunities, particularly for women and young people, and enhanced global health security. The case for investing in nursing education, jobs and leadership is clear: relevant stakeholders must commit to action.

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