

STATE OF THE WORLD'S NURSING 2020

WEB ANNEX *Nursing roles in 21st-century health systems*



*Investing in education, jobs
and leadership*



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2020

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World Health
Organization

State of the world's nursing 2020: investing in education, jobs and leadership. Web Annex. Nursing roles in 21st-century health systems

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Background

This background paper provides a synthesis of the contemporary evidence base on the roles and responsibilities of nurses contributing to Goal 3 of the 2030 Agenda for Sustainable Development. It was prepared in support of the [State of the world's nursing 2020 report](#). It categorizes intervention areas according to the WHO 13th General Programme of Work and the “triple billion” goals:

- 1 billion more people benefit from universal health coverage;
- 1 billion more people have better protection from health emergencies;
- 1 billion more people enjoy better health and well-being.

This paper has been developed through the examination of a broad range of studies, comprising quantitative (experimental and non-experimental) and qualitative primary studies, mixed methods reviews, and field descriptions.

Role of nursing in achieving universal health coverage

Primary health care

Nurses tend to be the main providers of primary health care services in many countries, and therefore will have a key role to play in its expansion (1–3). A Cochrane systematic review showed nurses to be effective in the delivery of a wide range of services to address communicable and noncommunicable diseases, including clinical decision-making roles, health care education and preventive services (4). Nurses provide a wide variety of basic nursing services at the primary level, such as wound care, vaccination and health promotion, but are also effective at providing more specialized care, including through nurse-led services (5). For example, nurse-led HIV services (assessment of eligibility for antiretroviral therapy (ART); initial prescriptions for ART; and follow-up care for ART) has been significantly associated with good quality of care and increased retention of HIV patients at 12 months (6). As part of interprofessional primary care teams, nurses lead the coordination of care for patients with complex chronic diseases and work with such patients for 6–12 months to reach stabilization and self-efficacy (7).

Nurse-led primary care services can, in certain settings and under the right circumstances, lead to similar or in some cases even better patient health outcomes and



higher patient satisfaction than traditional care delivery models (4). The same systematic review found that nurses probably also have longer consultations with patients. The introduction of nurse-led heart failure clinics at the primary care level reduced heart failure-related emergency room visits, hospital admissions (by 27%), and the length of stay in the hospital (8). Nurses in Kenya, Malawi and the United Republic of Tanzania demonstrated high productivity in performing trichiasis surgery after training by an expert and with appropriate supervision (9). Increasingly, nurses have a more prominent role in the delivery of primary care: for example, over an eight-year period, the percentage of nurse practitioners in primary care practices in the United States of America rose from 17.6% to 25.2% in rural areas and from 15.9% to 23% in urban areas (10).

Quality of care and safety

Annually, more than 8 million deaths in low- and middle-income countries are attributed to poor-quality care (11). Nurses can and do contribute to improved quality of care, and to patient safety through the prevention of adverse events (12), but this requires that they work at their optimal capacity, within strong teams, and within a good working environment (13–18). Nurses also play an essential role in ensuring patient safety by monitoring patients for clinical deterioration, detecting errors and near misses, understanding care processes and the weaknesses inherent in some systems, and performing numerous other actions to ensure patients receive high-quality care (19). Examples of nurses' engagement with quality and safety are detailed below.

The importance of leadership and management to health worker performance is well established and applies to nurses as well (20, 21). A 2019 study in Italy showed that when nurses were satisfied with the leadership environment in which they operated, they felt less burned out and strained in their interpersonal relationships, they engaged less in misbehaviour, and their patients were more satisfied with the care they received (14). In Belgium, health workers, including nurses, associated better interprofessional teamwork with better quality of care and lower turnover intention by nurses (13). In contrast, burnout amongst nurses due to factors such as high workload and ineffective interpersonal relationships has been associated with declines in measures of patient safety (18). Positive work environments, increased nurse staffing levels, and education in mixed-skill teams are correlated with reduced hospital length of stay, lower incidence of adverse events such as pneumonia, gastritis, upper gastrointestinal bleeds, pressure ulcers, and catheter-associated urinary tract infections, and reduced overall mortality (15–17, 22–24).

Nurses also contribute to improved quality of care through the training, mentoring and supervision of community health workers. In many countries, nurses are the primary resource for training community workers and health volunteers to deliver prevention, treatment, and control services for neglected tropical diseases (25). At least half the community health workers in Fiji reported being supervised by nurses, to whom they reported at least three times per quarter (26). In India, nurses have trained community health workers to diagnose leishmaniasis, monitor treatment regimens and provide case follow-up (25). Nurses have also been integral to ensuring quality of the delivery of integrated community case management across several countries in Africa (Democratic

Republic of the Congo, Malawi and Mozambique), where they engaged in the selection, mentoring, and clinical and managerial supervision of community health workers (27). Supervision activities in these integrated community case management interventions included overseeing clinical skills, analysing reports submitted by community health workers and providing feedback, ensuring adequate medical supplies, coordinating logistics, providing management at sites, managing relations with the community, and providing recommendations or corrective actions (27). In South Africa, senior nurses were effective in supervising community health workers through household visits, on-the-job training, clinical debriefing, reviewing community health workers' daily logs and assisting with compiling reports. The community health workers who received this supervision from nurses were more motivated and performed a greater range of tasks (28).

Infection prevention and control and antimicrobial resistance

The central role of nurses in health care, including their proximity to patients, makes them crucial to the efforts to combat antimicrobial resistance (29, 30). This role includes assessing and diagnosing infections (in particular by advanced practice nurses); administering and in some cases prescribing antimicrobials; monitoring treatment outcomes and reporting side-effects; providing vaccinations; and educating patients, families and communities (30). Poor-quality care can increase the risk of health care-associated infections and antimicrobial resistance, but their occurrence can be effectively reduced through infection prevention and control measures (12, 30, 31). Nurses in roles as infection prevention professionals (32) and "champions" can contribute to a decrease in avoidable transmission of resistant pathogens and an improvement of best practices such as hand hygiene (33). Other critical contributions by nurses entail conducting preoperative assessments to reduce post-operative complications such as wound infections, and detecting the presence of methicillin-resistant *Staphylococcus aureus* (34–37).

Communicable diseases

Vaccination

The burden of infectious diseases across the globe has been greatly reduced by vaccination; nurses play a key part in this success (5, 38). A systematic review indicated that non-physician clinicians, especially nurses, contributed to a 44% increase in influenza vaccination rates (39). The opportunity to discuss vaccination through personal contact with health professionals may support greater uptake. Nurses, who are often embedded in communities, are therefore best placed to develop and implement such initiatives (5, 40).

Tuberculosis

Nurses have long been involved in the management of tuberculosis (TB), including TB case detection, enrolling cases in treatment, providing and supervising clinical treatment, and patient education (41–44). The holistic approach often taken by TB nurses includes assessment of the client's social context, psychosocial support to the client, counselling

and motivation, facilitating socioeconomic support for the client, and coordination of care provided to TB patients by community health workers (41–44). The essential role of nurses in the management of TB is not limited to high-burden countries (44). Nurses in Japan emphasized that their support to clients had to be empathetic, reliable, motivational, and culturally appropriate, and needed to help the client develop a foundation for a healthier life after TB treatment (45). In the Netherlands, nurses are part of teams screening for latent TB infections. As part of these teams, nurses provide treatment support based on the clients' needs, which has led to higher treatment completion (46). Nurses have also played an important role in responding to multidrug-resistant tuberculosis, both in settings with a high burden of the disease and in low-burden settings (41, 45, 47). Nurses are central to providing treatment for multidrug-resistant tuberculosis at the community level (41, 47). In South Africa, nurse-led mobile injection teams were found to be more cost-effective than treating multidrug-resistant tuberculosis at hospitals or clinics (47).

Neglected tropical diseases

Poor and marginalized populations are disproportionately affected by neglected tropical diseases (25, 48, 49). Nurses are the primary point of contact in the health system for these populations and in some settings they are the only primary care provider (50). They are engaged throughout the spectrum of measures to control neglected tropical diseases, including community education, mass chemoprophylaxis, identifying and diagnosing disease cases, determining disease prevalence, screening, confirming suspected cases identified by community health workers, administering drugs, conducting minor surgery (for example, for trachoma), and providing patient education on disease management and disease-specific self-care (50).

HIV

Nurses and midwives played a crucial role in providing HIV/AIDS services within their national AIDS programmes, and supporting the attainment of previous global targets for combating HIV/AIDS, malaria and TB (51). It is anticipated that these workforces will continue their contributions as the world strives to end HIV as a public health threat by 2030 (52). Nurses have a critical role to perform in HIV treatment and prevention, including the use of antiretroviral drugs for pre-exposure prophylaxis, and providing HIV services to key populations (53–55). Evidence from a Cochrane systematic review showed nurses to be effective in initiating first-line antiretroviral therapy and in maintaining patients on treatment (56). Nurses can effectively administer community-level voluntary medical male circumcision programmes (57–63), an approach that has been effective for HIV prevention in high HIV burden settings (64). Provision of voluntary medical male circumcision services by nurses was shown to be safe and efficient, and associated with high levels of patients returning for follow-up care (59, 60, 65).

Noncommunicable diseases

Nurses can contribute to the integration of management of noncommunicable diseases (NCDs) into routine primary care, thereby expanding coverage and improving equity (66, 67). Nurses may be the only health care professionals in many places with whom people have contact (68). This ideally positions them to offer education on risk reduction throughout the patient's lifespan (69). NCD management models that rely on physician-delivered services face feasibility challenges in contexts with shortages of medical doctors (70). Nurses have been successful in providing NCD services, not only in response to shortages of physicians, but as a result of the orientation of nurses within health care teams and their educational preparation and scope of practice, and because nurses widely engage in NCD prevention (68, 69, 71–75). The contemporary evidence base provides a strong foundation for expanded roles of nurses in NCD care and prevention (68, 69, 71–75).

As an organized group of professionals, nurses can also have an influence on factors that contribute to NCDs. By using the knowledge gained from working at the individual and community levels to inform the policy advocacy activities of their nursing associations, they may in turn have some influence at national and international levels (68).

Tobacco cessation

Tobacco consumption is a major global public health problem, killing over 8 million people every year (76). Nursing interventions for tobacco cessation (including health advice, verbal instructions on cessation, information about harmful effects, counselling, and provision of educational materials) have been shown through a Cochrane systematic review to increase the likelihood of quitting (77). "Quit lines", through which tobacco users can access brief and potentially intensive behavioural counselling, have been shown to increase the absolute quit rate of those who call in by four percentage points as compared to control groups (78). In Thailand, the national quit line counselling services are delivered entirely by nurses. This service was associated with a 12-month quit rate of 19.5% for callers who completed counselling and received at least one follow-up call, which is promising in a context where, despite policy interventions, national smoking rates had not declined in several years (79).



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Mental health

Nurses are often the largest group of professionals contributing to mental health promotion and the identification, treatment and recovery of individuals experiencing mental health conditions (80). Globally, the mental health workforce is significantly underresourced, with a median of less than one mental health worker per 10 000 population (81). This may be addressed through expanding the roles of nurses and integrating mental health into primary care. A Cochrane systematic review suggested that nurses and other health workers who may not have delivered specialist mental health care in the past may improve outcomes for a variety of mental health problems, such as general and perinatal depression, post-traumatic stress disorder, and alcohol use disorders, and patient and carer outcomes for dementia (82). Integration may however pose challenges, such as a lack of mental health policies for nursing staff to address care needs and inadequate training and resources (83). These may be averted by pre-service and regular in-service training for nurses that can promote their competence in the identification of, management of, and support for persons experiencing mental health conditions; develop their skills to provide immediate psychosocial support and appropriate support or treatment; and encourage the use of human rights and recovery approaches in their mental health care practices (84–88).

Nursing contribution to care across the life course

Maternal health

Midwives are the primary providers of care for childbearing women across the globe. In many countries, the pre-service education of midwives requires a nursing education programme followed by a programme in midwifery; these health workers are sometimes

referred to as nurse-midwives. Midwife-led care has been shown to provide benefits to women and newborns, with no adverse effects (89). Care led by midwives is associated with more efficient use of resources and improved outcomes when provided by midwives who are educated, trained, licensed and regulated; midwives are most effective when integrated into health systems that have effective teamwork, well functioning referral mechanisms, and sufficient resources (90). Countries with long-established midwifery services have very low rates of maternal and newborn mortality, while countries that have strengthened midwifery as part of the health system have seen a fall in maternal mortality and improved quality of care (91). Maternal health



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care is also provided by other health workers, such as obstetricians, doctors, and nurses specializing in women's health (89). Nurses provide services in antenatal and postnatal care contexts, where they may offer contraceptive advice, provide social support to women in the postpartum period, and engage in mental health assessment and promotion, including treating postpartum depression (92–96). During the process of childbirth, nurses provide clinical and psychological support and are key to ensuring that women receive respectful care from the health services (97).

Neonatal health

The recruitment, training, deployment and retention of competent nurses is crucial to the delivery of cost-effective solutions that exist for the main causes of newborn death and disability (98). Newborns born preterm or with a low birthweight, and sick newborns, need special support and timely, high-quality inpatient care to survive, which requires dedicated ward space and care that is available 24 hours a day, seven days a week (98). Neonatal nurses with specialized competencies are effective in delivering this care, supported by other neonatal specialists (98). The survival of premature infants in facilities has been linked to the number of neonatal nurses working per shift, as well as to the specialist levels of education and experience of nurses delivering care (99, 100). Nurses and midwives currently provide the bulk of facility-based care, but a critical gap for neonatal nursing remains in low- and middle-income countries (101, 102). In contrast, in many high-income countries, advanced neonatal nurse practitioners provide primary patient management for small and sick newborns with significant success (103).

Child health

In many parts of the world, children are cared for at primary care level by nurses, including specialist child nursing care (93, 104). This role is often focused on health promotion and education, prevention, screening, early intervention, child growth and development, and supporting parents (93, 105). Nurses can also have an expanded role, such as that included in the WHO guidelines on the integrated management of childhood illness, which includes nurses as health care providers able to offer treatment for malaria, diarrhoea, and respiratory conditions in children aged under 5 years (106). A systematic review that focused on the care of children found that nurse practitioners offered services to children, young people or their families related to asthma, concomitant asthma and sickle cell disease, anxiety, eczema and obesity (107). Nurse practitioners also offered broader services that addressed social determinants of health through promotive, preventive and rehabilitative activities, including parental functioning, access to health care for vulnerable children, and well-being of runaway adolescent girls (107).

School health

School health services reach children and adolescents on an almost daily basis, and are well placed to reach adolescents with preventive interventions (108). Such school health services are available in at least 102 countries worldwide, where nurses form the backbone of the services in most countries (108, 109). These nurses provide services to help older children and adolescents survive and thrive, and for many students the school nurse is the only source of accessible, visible and confidential care (108, 109). School health services are usually provided in several health areas, including infectious diseases, mental health, nutrition, obesity, sexual and reproductive health, dental health, vision, hearing, emergency care, substance use, chronic illnesses, musculoskeletal disorders, violence, endocrinology and neurology (109, 110).

Sexual and reproductive health

Nurses offer services across the spectrum of sexual and reproductive health, including treatment and prevention of sexually transmitted infections and family planning. The role of nurses in treatment and prevention of sexually transmitted infections has changed over the years. Early approaches often placed nurses in the role of assistant to the doctor or surgeon (111). In contemporary roles, nurses are located more centrally in the provision of care, with responsibility for preventive counselling and treatment, as well as the establishment of treatment environments that are age appropriate and allow for confidential care (112).

The role of nurses is crucial to improving the quality of and universal access to sexual and reproductive health care services so that users (girls, women, couples) can choose the timing and spacing of their children (113). In their engagement with clients, nurses address traditional gender or cultural norms, and provide sound responses to real or perceived concerns about the safety and side-effects of modern contraceptive methods (114). Nurses also have a role in encouraging and enhancing the ever-increasing use of self-care tools and methods, such as self-administered screening tests for sexually transmitted infections (115) and self-administered injectable contraception (116). Over the last several decades, nurses have been providing an increasing number of family planning services, including those previously restricted to physicians or gynaecological specialists (117). Nurses can safely and effectively provide oral contraceptives, injectable contraceptives, implants and intrauterine devices (118). Evidence also supports the efficacy of nurses in cervical cancer screening and treatment for women of reproductive age and beyond, and in the context of specific health challenges such as HIV (114, 119). Provision of information and advocacy with age-eligible adolescents and their parents or caregivers are central components of the nurses' role in expansion of HPV vaccination services (114, 120, 121).

Ageing

Nurses play a central role in the provision of care for older adults and can be instrumental for the delivery of integrated care, which has been shown to result in better outcomes for older populations (122). The involvement of, or leadership by, appropriately trained nurses who complement physicians or other care providers in key functions has repeatedly shown to improve health workers' adherence to guidelines and patients' satisfaction, clinical and health status, and uptake of health services (123, 124). Nurses also help bring integrated care services and health education to individuals in their communities, enabling older people to age in place, which can yield significant improvements in their quality of life (125). In many countries, nurses play an equally important role in the provision of long-term care for older adults who experience significant declines in cognitive ability or physical capacity and who can no longer carry out day-to-day tasks without the assistance of others (126). In this role, nurses enable people to live and die with dignity, which is the cornerstone of palliative care (127). Nurses are also often best placed to recognize signs of elder abuse, take the necessary action and follow up (128).

Role of nursing in dealing with emergencies, epidemics and disasters

Nurses are involved in delivering care for clinical emergencies (such as accidents or heart attacks), preventing and responding to epidemic outbreaks, and responding to disasters and humanitarian crises.

Acute onset emergencies

In many settings, care for the acutely ill and injured is provided by nurses (5, 129–131). Nurses are often the first provider that a patient sees in a health facility, as their roles often include the initial triage of patients (132). Nurse may also provide basic emergency care, including early recognition of life-threatening conditions and provision of immediate and effective interventions such as changes in patient position, administration of medications, performance of needed procedures, and initiation of early referral (133). Training for nurses in basic emergency care can be very effective. For example, simple process changes led by nurses in Uganda (such as organizing emergency unit beds by triage colour category, and using the course content to create protocol posters and checklists for equipment and supplies) led to dramatic mortality reductions from five sentinel emergency conditions (129).

Epidemic outbreaks

Nurses are called upon in times of crisis to take on new roles and responsibilities. They are often recruited to take on new tasks and assume enhanced roles when systems have otherwise failed to control epidemics (111). When the 2002–2003 severe acute respiratory syndrome (SARS) outbreak threatened to overwhelm some health systems, nursing leaders updated nursing care procedures on a daily basis, coordinated with other health care leaders, held workshops, and increased the cooperation and confidence of nursing teams, thus enabling better care for patients (134). In the Republic of Korea, the concerted effort of infection control nurses was instrumental in ending the Middle East respiratory syndrome coronavirus (MERS-CoV) outbreak in 2015 (135). Using social networking, these nurses were able to support each other through sharing experiences and ideas, and, drawing on the guidelines developed by their national association, to strengthen the epidemic response in their individual hospitals (135). This strong tradition of nurse involvement in the management and prevention of communicable disease outbreaks continues today (5), where it remains a focus of nursing education (136).

Nurses remain central to the management and prevention of epidemics (137), such as those caused by the Zika virus in 2016 (138, 139) and the Ebola virus in 2014 (140, 141), and the current COVID-19 pandemic (142). For example, during the Zika epidemic, Zika response nurse coordinators in the United States improved the coordination, consistency and effectiveness of the response, without overburdening other health care workers (138).

In the 2014–2015 Ebola outbreak in West Africa, nurses played a crucial role as first responders (141, 143). During the COVID-19 pandemic, nurses provided vital services ranging from contact tracing in the community to advanced critical care in intensive care units (144). Nursing leadership at the hospital level developed essential triage mechanisms, appropriate allocation of staff according to skills mix, and rational deployment of scarce medical supplies (145). Health workers, including nurses, often put their own lives at risk by working in settings with shortages of personal protection equipment (142, 146).

Disaster response

Across the world, nurses are called upon to respond to disasters. Nurses need to receive adequate professional preparation for disaster response, and the preparedness of the health facilities that they work in needs to be assured, as part of the overall preparedness of the health system (147–151). Training may enhance nurses' actual and perceived capacity to respond to disasters: nursing students who took a module in disaster nursing and management at two universities in Turkey showed a significant increase in knowledge and preparedness for roles in disasters (152). The WHO Emergency Medical Teams Initiative is an approach to develop and invest in the competencies of teams within WHO Member States; most members of the teams are nurses (153). Engaging nurses in additional efforts to enhance knowledge and skills can build countries' capacity to respond to future emergent situations.

Chronic, complex emergency settings

Disasters and conflict can create fragile and vulnerable communities, weaken health systems, and result in poor health outcomes (154). Populations living in such settings not only suffer from injuries and trauma due to conflict, but also are at increased risk of infectious diseases, disruption in immunization, and reduction in access to health workers and health care (154). This constellation of factors puts increased pressure on health workers, including nurses, who remain working in a dangerous setting (155). Nurses may face personal and professional challenges that include the threat of abduction, coping with the death of colleagues, fear of their own death, increased workload, and increased complexity in workload (such as having to deal with firearm wounds), as well as eroding professionalism. Despite these conditions, nurses and other health workers have shown resilience in the face of these challenges and have continued to deliver services (155).

One such setting is Somalia, where, in the midst of conflict, experienced nurses were diagnosing most cases of pulmonary TB while the medical doctors diagnosed and initiated treatment for more difficult cases, such as TB meningitis or paediatric TB (156). When these health workers required support for more complicated cases, they had regular communication between a medical referent in Nairobi and an expert nurse and doctor in Somalia. As a consequence of their efforts, local health workers achieved a TB treatment success rate of 79% – the same success rate achieved by international health workers prior to fleeing the conflict (156). In another example, two nurses created a temporary mobile camp for refugees travelling through Europe. These nurses were later joined by a medical doctor, a pharmacist and a social worker. Together they offered a range of services, including for respiratory tract infection and dental caries, but mostly they treated post-traumatic stress disorder (157).

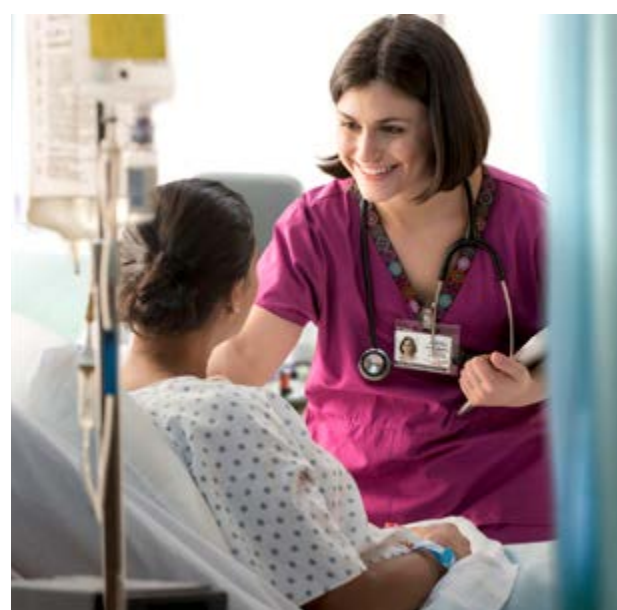
Role of nursing in achieving population health and well-being

Enhancing the health and well-being of populations towards the achievement of the Sustainable Development Goals (SDGs) will require health workers, including nurses, to address the social determinants of health. Health workers must serve as change agents at the individual level amongst the populations they serve and at the policy level through multisectoral action (158).

This agenda entails taking action on a wide range of social determinants of health, including social equity, income disparities, food security, gender equality, sanitation and climate change (159). The commitment of nursing to the SDGs is evidenced in professional organizations and nursing initiatives that integrate or articulate specific reference to the SDGs in publicly stated priorities (160). Nurses have a critical role to play in the attainment of the SDGs through multisectoral action and addressing the social determinants of health, as well as through their work with clients and through their potential role as leaders in this effort (2, 159–166). The social justice and health equity ambitions of the SDGs are at the heart of nursing, and speak to the foundation and philosophical roots of nursing (2, 161, 162). The SDGs represent a policy window for nurses, providing the nursing profession with the opportunity to play a significant role in informing and shaping direction of policy as well as contributing to achieving the desired outcomes of these policies and goals (159). As such, nurse leaders are encouraged to lead efforts to attain the SDGs and overcome the social challenges to health (163).

The prevention of diarrhoeal diseases through the promotion of handwashing, nutrition and sanitation (2, 165) are examples of areas with emerging evidence of nursing effectiveness in addressing the social determinants of health (5). Nurses are well positioned to strengthen health systems because they know their patients best, they understand the impact of the health system on their patients, and they can develop solutions drawn from this knowledge and their access to patients and communities (161, 162, 167, 168). Nurses who are trained to work across sectors, who are enabled through a scope of practice that allows them to address health inequities through their work, and who are empowered to mobilize resources, including partnerships, can contribute to the health goals more broadly through their work (2, 161).

Central to the achievement of population health and well-being and the SDGs are efforts to contain climate change and its impact on health. Both the SDGs and the WHO 13th Global Programme of Work include targets aimed at mitigating the impact of climate change. These include



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efforts to strengthen the resilience of the poor and those vulnerable to climate-related events, and to reduce mortality from climate-sensitive diseases such as diarrhoeal diseases, malaria, African trypanosomiasis, leishmaniasis, schistosomiasis, intestinal nematode infections and dengue fever. These ambitions cannot be achieved without the contributions of nurses, who will be amongst the first to deal with the health impacts via their engagements with individual clients and communities (169). This is an emerging area of public health for which nurses and other health professionals will need support in preparing for and maximizing their contributions (169–171).

Youth

Enabling and sustaining healthier populations is dependent upon both ensuring the health of young people through their equitable access to universal health coverage, and ensuring they are healthy and willing to continue the work of sustainable development into the next generation (172). The idea of youth-focused health services that include health workers who are sensitive and attuned to the needs of youths has a long tradition. For example, in 1994 one such clinic was set up to serve the reproductive health needs of youths in Zambia (173). Contemporary literature shows a clear understanding by health workers, including nurses, of the kind of approaches needed to deliver services that will be attractive to young people, including being trustworthy, non-judgemental, client centred, and accessible, and meeting youths on their own terms (174–177). Empirical evidence from studies in different settings, however, shows that the extent to which this is reached remains variable. Adolescents and young adults receiving cancer care at hospitals across Australia regarded nurses and allied health staff as providing them with informational support while hospitalized, and also as providing a strong source of emotional support (178).

Gender

SDG 5 calls for the achievement of gender equality and empowerment of all women and girls (179). As yet, health systems are not gender neutral (180). Multiple barriers (for example, power imbalances that favour some, while keeping others from access to resources such as money or transport), social stratifiers (such as race, class or caste), and social norms (such as those that stigmatize and discriminate) keep women – in particular poor women – and other vulnerable groups from equitable access to health care, and the enjoyment of full health and well-being (180–183). Such inequitable access as a result of gender norms and gender inequalities threatens our ability to reach universal health coverage and achieve the SDGs (184). The focused work of nurses on the most vulnerable individuals and populations can help to overcome these challenges (3, 181–183).

Nurses can increase access to health services that represent particular obstacles to young women, such as abortion care (185, 186). Nurses have been shown to be effective in the delivery of abortion care and in post-abortion care (187). Optimizing their role in the delivery of such care can lead to better access to reproductive health care for women in their youth and well after (187). Health professionals, including nurses, are also important to the social support needed by women with breast cancer (188).

Nurses have an important role in efforts against gender-based violence. A Campbell systematic review found that sexual assault nurse examiners or forensic nurse examiners are effective in sexual assault forensic examination and documentation; that these nurses are likely to provide prophylaxis for sexually transmitted infection and pregnancy; and that this care represents good value for money (189). Studies on screening for intimate partner violence most commonly reported nurses (45%) as the health professionals who conducted in-person identification (190). Conducting such screening may still be a challenge for nurses, though, as they may face barriers such as not wanting to offend their patients during questioning (191). The nursing role can be supported through education and guidelines that inform and direct their care (192–194). Providing nurses and other health workers with the competencies for responding to domestic or intimate partner violence and sexual violence against women can enhance the effectiveness of these interventions (195).

Nursing research evidence: a reflection

This background paper has summarized evidence on the contribution of nurses across different clinical interventions and public health areas. The strongest evidence comes from a systematic review that included 18 randomized controlled trials, which showed the effectiveness of nurse-led interventions across a range of primary care functions (4). However, 17 of the 18 included studies were conducted in high-income countries, with only one from a middle-income country and none from low-income countries. Further, Cochrane and Campbell reviews have also been conducted for specific clinical or programme areas, including antiretroviral therapy, tobacco cessation, mental health and sexual assault examination. Among these, one included only randomized controlled trials, while the others included both experimental and quasi-experimental studies, including controlled trials (randomized or non-randomized), controlled before and after studies, cohort studies (prospective or retrospective), and interrupted time series studies, thus enabling comparison between interventions and controls (56, 82, 189).

The Campbell review focused on practices in the United States and the United Kingdom and was thus limited to studies from those countries. The review on antiretroviral therapy only included studies from Africa. All studies in the review on tobacco cessation were from high-income countries, mostly the United States. The mental health review only focused on low- and middle-income countries, including seven studies from low-income countries and 15 from middle-income countries (56, 82, 189). This background paper also highlights specific gaps in the evidence on effectiveness, such as nursing interventions with respect to the social determinants of health, including climate change, and nursing interventions in complex emergency settings.

Leveraging different research settings and methodologies

While the aforementioned evidence reviews are essential to establishing the effectiveness of nursing interventions, the settings of the included studies limit their generalizability and global applicability. Furthermore, experimental and quasi-experimental investigations most typically compared nurses to those in other health occupational groups. While this may offer useful insights, the method is ill suited to illustrate and fully understand the team-based nature of efforts and interconnected processes required for the successful delivery of quality health care. A broader range of studies, comprising quantitative (experimental and non-experimental) and qualitative primary studies, mixed methods reviews, and field descriptions, provide a more comprehensive overview of nursing policy issues across the globe. However, most of this evidence was generated in high-income settings (4, 196), including the generation of research priorities (197).

More needs to be done to support the documentation of nursing interventions and nursing science in low- and middle-income countries, so that nurses themselves drive their research agenda based on their own experience of working in health service delivery. Nurses already make a very substantial contribution to health care science, including developing innovative research methods and using these methods to investigate issues of importance to improving global health (198). Research has shown that the quality of evidence for effective strategies to improve health worker practices in low- and middle-income countries is low (199). Investment in nursing research must therefore focus not only on increasing the quantity of output, but also on increasing the quality of the science, as this will contribute to our overall health workforce knowledge.



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