ICN Policy Brief

Quantity, Quality and Relevance of the Nursing Workforce to Patient Outcomes

Authors
Allison Squires, PhD, RN, FAAN; Jill White, AM RN RM MEd PhD; and Walter Sermeus, PhD, RN, FEANS.

Purpose
The purpose of this policy brief is to provide guidance on the relationships between quality and safety of patient care, patient and population outcomes and nursing.

Evidence now demonstrates the best patient and population health outcomes occur when there is the right mix of health workers in the right place, at the right time with the right resources needed to perform their jobs, and management support to enable them to work effectively to their full scope of practice. This brief summarizes the evidence concerning the impact of a well-educated nursing workforce on positive patient quality outcomes and discusses the implications of this evidence for country level human resources for health (HRH) planning.

This paper should be read in relation to the zero draft of the “Global Strategy on Human Resources for Health: Workforce 2030”.

Background
With increasing consistency, research demonstrates that the safety and quality of care delivery is enhanced when nurses have an appropriate level of education, the resources and the support to enable them to provide high quality of care.

Nurses witness and experience the consequences of health policy decisions, both intended and unintended on patients and care practice within health settings. The over 16 million nurses worldwide see the effects of health and social policies on patients, families and communities' access to care, direct and indirect costs of healthcare and the consequent effects of policy changes on the access, affordability, appropriateness and quality of care provision. 1, 2, 3, 4, 5, 6, 7 Nurses make up the largest proportion of healthcare professionals, providing over 80% of all care episodes worldwide.8

The work of nurses and their ability to provide safe and effective care is inextricably impacted by policy effecting organisational funding, staffing, access to reimbursement, scope of practice and the competing service demands of vertical programmes. Nurses provide the majority of care in underserved communities which lack affordable access to all levels of healthcare, whether rural
and remote communities of high income countries or all communities in low income countries.\textsuperscript{9, 10, 11, 12} They coordinate the care of all health professional groups in acute care facilities and are often responsible for ensuring safe practice.

**Evidence linking Nursing and Positive Patient Outcomes**

Adequate registered nurse staffing has been demonstrated to decrease deaths, injury and permanent damage.\textsuperscript{13,14, 15, 16,17, 18} It is also implicated in prevention of healthcare-acquired-infections which were estimated to cause 99 thousand deaths annually in the USA and cost an estimated $US 6.5 billion in 2004 in the US alone.\textsuperscript{19}

Evidence demonstrates nurses provide cost-effective, accessible quality care with greater or equal clinical outcomes and patient satisfaction where local policies and politics enable them to offer these services.\textsuperscript{20, 21}

Nurse practitioner studies internationally have repeatedly found the effectiveness of nurse-led care in community services, including the findings of a Cochrane Collaboration systematic review.\textsuperscript{22,23} Evidence is clear that nurses have a significant role to play in the community based management of non-communicable diseases, and patient access to appropriate treatment is enhanced by nurse prescribing.\textsuperscript{24, 25, 26}

**An Appropriately Prepared and Available Nursing Workforce**

To assure achievement and sustainability of affordable care for all, i.e. universal healthcare coverage (UHC), a supportive and enabling environment focused on quality of care is needed to maximise the return on investment made in training, recruitment and retention of nurse in the healthcare workforce.\textsuperscript{27} The following sections describe the key points of investment that can help inform policymakers for a sustainable nursing workforce that provides quality.

**Entry Level Education**

Research shows that more highly educated nurses lead to lower patient mortality, lower complication rates, shorter length-of-stay in hospitals and may lead to lower costs by avoiding the costs of poor quality.

"…a 10% increase in the proportion of nurses holding a bachelor’s degree was associated with a 5% decrease in both the likelihood of patients dying within 30 days of admission and the odds of failure to rescue."

This research was carried out in the United States and there exists significant variability across countries and across country income levels in the entry to practice educational levels of a nurse. The international aspiration for more effective healthcare delivery is to improve the level of education of nurses in all countries to as close to a bachelor level entry as is possible for the circumstances of the country. This will require collaborative planning between the health and education systems and could lead to creative solutions such as degree completion programmes for nurses with practical or technical education and training.

**Staffing and Logistic Support**

Nurses need qualified and competent personnel to work with in order to ensure quality care is provided. Careful and effective health workforce planning is required to meet the goal of scaling up sufficient numbers of a competent and diverse nursing workforce. Ensuring nurses have the necessary competencies and scope of practice that allows them to effectively promote health and provide care is needed if we are to ensure equitable access to quality health services.
In hospital settings, there are no universal nurse staffing standards as this depends on many contextual factors such as case-mix, patient acuity, scope of practice, etc. Countries should define safe staffing levels for different types of nursing wards, as well as for primary care and other care delivery sites. There is a growing body of evidence from the research group led by Linda Aiken on safe staffing ratios in the multi-country studies. Needleman (2015) summarizes much of this staffing outcomes research in his review in the special edition of Nursing Economics. Notably, in one study safe staffing levels were estimated to save USD$6 billion due to savings from reduced medical errors and the added costs of more nurses paid for themselves from the savings with about USD$1 billion to spare.

Finally, for optimal contribution to health services, nurses require collaborative support personnel who can facilitate their roles and care delivery that they may manage or supervise. These may include nursing assistants or community health workers, depending on the context of care. Collaborative support personnel can help offset high care demands that result from nursing shortages. They may also help organisations reach the minimum staffing goals.

Management Support & Development

Research demonstrates that nurses leave employers when management is poor. Poor management practices include lack of flexible scheduling; lack of support when conflicts arise (especially with physicians); poor supply management; a punitive culture when mistakes are made; and a lack of staff education programmes. This has been the focus of the now significant body of research into what is known as the Magnet hospital studies which explored the characteristics of the facilities where nurses were happy to work and where staff vacancies were low.

In capacity building for a sustainable nursing labour market it is important to include nurses in management and leadership training. This will provide managers with the knowledge and skills to develop supportive practice environments for quality care. A supportive work environment where nurses feel their work is recognized; they have support during inter or intra-professional conflict; they are paid regularly; they have a voice in organisational governance; and opportunities for advancement mean that labour markets will become stable enough to produce quality care outcomes.

Regulation

It is important that effective regulatory frameworks are in place to ensure the protection of the public and in so doing ensure the competence of the entry nurses and their ongoing competence. A recent World Bank report concluded that a lack of regulation has negatively contributed to quality health worker production while obstructive regulations delay health workers entering the labour market.

Standards for practice, standards for education programmes, codes of ethics and codes of conduct are all part of such a robust regulatory system. Addressing health promotion and supporting self-care, key factors in addressing health coverage, lie within nurses’ scopes of practice. The work environment is also a key aspect of improving patient safety and the quality of health care.

Nursing encompasses autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well and in all settings. Nursing includes the promotion of health, prevention of illness, and the care of ill, disabled and dying people. Advocacy, promotion of a safe environment, research, participation in shaping health
Regulation is important for accurate workforce data on health professionals and their level of practice authorisation. Further, it is important at country level to be able to ascertain accurate data on the numbers of each health professional classification and data on the within profession specialties in order to plan for workforce future needs.

**Relationship to the Sustainable Development Goals**

**SDG Goal 1 - No Poverty:** Nurses’ economic contributions to a country increase with education and once educated, nurses help to address the health sequelae that emerge from poverty and contribute to poverty fighting efforts.

**SDG Goal 2 - End Hunger:** Nurses play a role in the identification and addressing individuals living in poverty and their associated health risks.

**SDG Goal 3 - Good Health & Well-Being:** Nurses, as the largest health provider, play a significant role in the quality of the country’s health system, both in preventive and health promotion actions and in treating disease and illness.

**SDG Goal 4 - Quality Education:** As demonstrated in the research noted throughout this brief, investments in nursing education have a significant impact on the quality of health care services, resulting in higher patient outcomes.

**SDG Goal 5 - Gender Equality & SDG Goal 10 - Reduced Inequalities:** Nurses represent the majority of health workers in a country. Therefore a country nursing workforce plan that includes gender sensitive elements would assist a country in addressing issues of gender and diversity in its health workforce.

**SDG Goal 8 - Decent Work & Economic Growth:** Nurses who work in high quality supportive environments, remain in their positions and their salaries, which often place them solidly in the middle class, contribute to strong economic growth within their communities.

**SDG Goal 16 - Peace, Justice, & Strong Institutions:** Nurses and NNAs recognize the importance of work creating and supporting diverse multicultural workplaces.

**Connection to WHO Global Strategy on HRH**

*Objective 1: Implement evidence-based HRH policies to optimize impact of current health workforce.* The recommendations included in this brief are all derived from an extensive body of international evidence from high, middle and low income countries. Countries that collaborate with their national nursing associations to revise policies so they are based on evidence that optimises patient outcomes are more likely to improve population health and effectively manage health system costs.
Objective 2: Align with national and global HRH investment frameworks; maximize opportunity for employment creation and economic growth. This brief offers key areas of investment for stakeholders involved in nursing human resources development. By focusing on strategic investment in nursing human resources through educational approaches, policymakers can not only help meet the goals of the WHO HRH framework, but will receive the double benefit of helping meet many of the SDGs.

Objective 3: Build capacity of national and international institutions for effective global and national HRH leadership and governance. Investments in the professional institution of nursing are investments in women’s education, economic contributions and development. Strengthening the regulatory capacity of the profession for autonomous accountability will improve standards of education, care, and practice. These institutions, however, require capital investments. Said capital does not have to come from government sources alone; it can come from a multiplicity of donors who can help assist the nursing profession in creating and sustaining regulatory institutions.

A critical element of governance is knowing exactly how many nurses are in a country. Nursing human resources data should include information that clearly differentiates 1) nurses’ educational levels and 2) place of employment. This data is critical to effective workforce forecasting and resource allocation. Publicly available average salary levels would also help enhance transparency in health system financing and foster economic analyses of the economic contributions of nursing personnel.

Objective 4: Ensure HRH efforts and national and global levels are underpinned with credible, reliable and timely information and evidence. By implementing national nursing reports on a regular basis, countries can attract additional resources for investment in nurses. These reports may also facilitate international nursing workforce comparisons that would facilitate partnerships that can help support the work of the profession and improve health outcomes.

Key Messages for Policy-makers

- With increasing consistency, research demonstrates that the safety and quality of care delivery is enhanced when nurses have an appropriate level of education, the resources needed to do their work and the support to enable them to work to their full scope of practice
- Entry level nursing education should require a minimum of 12 years of schooling and strive toward the bachelor’s degree as the minimum entry level where possible.
  - Reduced barriers to employment opportunities will improve with reduced time to hire between graduation and entry into practice in both the public and private sector and help reduce unemployment and underemployment, especially among individuals under 30.
  - Staffing and logistical support is critical for improving patient outcomes. Innovative staffing models with a varied skill mix can help improve health outcomes. Appropriate staffing levels may also save money through reducing costly medical errors.
  - Management support & development is necessary for retaining nurses in healthcare organisations and reducing costs associated with turnover, along with providing career advancement opportunities.
  - Regulation is essential to ensure: 1) quality educational programmes for nurses at all levels; 2) safe work environments; 3) competent practitioners; and most importantly 4) the protection of the public and enhancing the health for all.
About ICN
The **International Council of Nurses (ICN)** is a federation of more than 130 national nurses associations representing the millions of nurses worldwide. Operated by nurses and leading nursing internationally, ICN works to ensure quality nursing care for all and sound health policies globally.

About the Authors
- **Allison Squires**, Assistant Professor and Director of International Education, New York University (NYU) College of Nursing; Research Assistant Professor at NYU School of Medicine, New York, USA. A health workforce capacity building researcher, her work has taken place in 30 countries, most of them low and middle income. She has consulted for the World Bank and Migration Policy Institute (Washington, DC) on various topics around global healthcare labor markets.
- **Jill White**, Dean Emerita, Professor of Nursing and Midwifery, Faculty of Nursing and Midwifery, University of Sydney, Australia. Senior Fulbright Scholar 2015, School of Nursing, University of Pennsylvania. Senior Scholar in Residence ICN, May-June 2015, Geneva. Professor White has extensive international experience, most recently in Tonga and Vietnam. She was the founder of the UTS WHO Collaborating Centre and facilitated the formation of the South Pacific Chief Nursing and Midwifery Officers Alliance.
- **Walter Sermeus**, Full Professor KU Leuven, Leuven Institute of Healthcare Policy. Sermeus is full professor in health care management and program director for health sciences at KU Leuven. He is also board member of various international organizations. His research interest is on health care organizations, clinical pathways, clinical process innovations and quality improvement. He is also currently Frances Bloomberg Distinguished Visiting Professor, Lawrence S. Bloomberg Faculty of Nursing, University of Toronto.
References

