



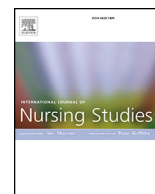
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## Editorial

# Advanced practice nurses globally: Responding to health challenges, improving outcomes



Globally, the nursing workforce serves as the backbone of healthcare systems, and the evidence shows that a well-educated and resourced nursing workforce achieves good health outcomes (Aiken et al., 2012; Anand and Barnighausen, 2012; Aiken et al., 2014). Advanced practice nurses have evolved in many countries globally, in response to changing and more complex patient needs, inequitable access and provider shortages (Maier and Aiken, 2016). This editorial introduces a virtual special issue of the International Journal of Nursing Studies, which focuses on the roles of advanced practice nurses globally in responding to existing and new health challenges (such as the Covid-19 pandemic) and evidence on their health outcomes. The Covid-19 pandemic underscores the need for a nursing workforce capable of adapting under new and challenging conditions. In many countries, nurses, particularly advanced practice nurses, along with other health professionals have worked in expanded roles and new skill-mix configurations to address the unprecedented challenges caused by the Covid-19 pandemic (Williams et al., 2020). The studies featured in this special issue show that advanced practice nurses' roles are growing worldwide, diversifying in specialty areas and are highly adaptive and effective in dealing with new health challenges. However, enabling policy and work environments are essential to ensure that this workforce can practice effectively and contribute to positive health outcomes.

The papers included in this special issue cover topics within the following areas: a) advanced practice nursing practice and patient outcomes; b) the tasks and clinical profiles of advanced practice nurses; and c) the Covid-19 pandemic and the advanced practice nurses' work and policy environments. We use the term advanced practice nurse to encompass all titles used across the papers in this special issue (including nurse practitioners, advanced clinical practitioners, clinical nurse specialists, among others) with a minimum Master's degree level education and advanced clinical practice.

Advanced practice nurse delivered care models are being implemented globally and research is growing to highlight the importance of optimally supporting and utilizing this critical workforce in patient care. Over the past several decades, research has been accumulating showing that advanced practice nurses-provided care is associated with positive patient outcomes and that these nurses add critical value across various health care settings (Newhouse et al., 2011; Swan et al., 2015; Aiken et al., 2021). The papers included in this special issue contribute to this growing body of evidence by demonstrating how advanced practice nursing care impacts patient outcomes. They highlight the effectiveness and quality of advanced practice nursing roles in countries at various stages of implementation (e.g., Norway at an early stage, England and USA at a more advanced stage) and across a range of specializations (e.g., orthopedic surgery, oncology, mental

health, cardiac surgery) and care settings (e.g., emergency care, inpatient and ambulatory care). For example, in Norway, a country early in the process of introducing advanced practice nurses, Boman et al. (2020) demonstrate that advanced practice nurses are as safe in diagnosing and treating patients with minor orthopedic surgeries in emergency care. A systematic review of the effectiveness of advanced practice nursing roles in postoperative cardiac settings found inconsistent results with regard to 13 identified patient outcome parameters as well as organizational outcomes (Audet et al., 2021). The studies included in the review were based on small sample sizes and several were assessed as having a high risk of bias. Future research with larger sample sizes is required in cardiac settings to evaluate the contribution of advanced practice nurses and their effects on patient outcomes in this particular setting.

In England, a country with an established tradition of advanced nursing practice, a retrospective cohort study of 108,115 lung cancer patients found that specific practice patterns of advanced practice specialist nurses were associated with improvements for patients. For instance, there was a 17% lower risk of death and lower rate of unplanned cancer-related admissions when an assessment was performed by a lung cancer nurse specialist compared with no assessment (Stewart et al., 2021).

Practice patterns of advanced practice nurses working with children and young people in mental health care were analyzed in the US. The study (Yang et al., 2021), which sampled 12,991 Medicaid-insured youths ages 0 to 20 years, found that youths treated by nurse practitioners were more likely to live in small and non-metropolitan areas compared with youths treated by physicians. Prescribing patterns of psychotropic medications showed no major differences.

Advanced practice nursing roles are growing in many new areas including mental health and care settings for individuals with intellectual disability. The paper by Scheydt and Hegedüs (2021) synthesized evidence to describe advanced practice nursing roles in mental health care. They found distinct roles including delivering psychosocial health promotion and prevention and consulting and coaching. Doody et al.'s (2022) paper that synthesized findings from studies conducted in Ireland over an 18 year period to identify the effect of advanced practice nurses on care provision for people with intellectual disability, found that intellectual disability nursing in Ireland positively contributes to the individual, family and community outcomes and it is a growing area of research and practice.

Advanced practice nursing has also been developing in Thailand. The role was formally introduced in 2003 and it is now accepted as a clinical career option; however, there is little understanding of the factors conducive to its success. Rakhab et al. (2021), survey of 333 advanced practice nurses identified a lack of clear progression routes with inconsistent

patterns of work including a wide variation in the number of days per week or levels of autonomy. Advanced practice nurses face lack of role clarity within their organizations and also regulatory barriers in the United States (Feyereisen and Goodrick, 2021). A retrospective study analyzed state-level factors influencing advanced practice nurses' scope of practice in the United States from 2001 to 2015 and assessed the factors that predict the nurse practitioners' scope of practice across different states. The study found that a concentration of rural hospitals was associated with lower levels of restrictions, while Board of Medicine governance was associated with increased levels of restrictions. Barriers to advanced practice nurses' independence were largely attributable to unfavorable governance arrangements. These studies highlight the importance of policy and practice factors in determining clinical practice and the contribution of this workforce to healthcare systems especially those facing unprecedented challenges such as the COVID-19 pandemic.

Several studies investigated how advanced practice nurses address the Covid-19 pandemic. Empirical studies from England and the US have analyzed the rapidly changing practice and policy environments of advanced practice nurses during the pandemic exemplifying how the nursing workforce was able to adapt under challenging conditions. The study by Morley et al. (2022) showed that advanced practice clinicians, which in England cover interdisciplinary clinicians including those with nursing background, transferred their advanced practice skills into areas of clinical need during the pandemic. They took on leadership positions to respond to the pandemic yet they faced challenges about lack of knowledge about their role and tension with physicians. A survey of advanced practice nurses assessed how removal of restrictions during the pandemic affected this workforce's performance (O'Reilly-Jacob et al., 2022). This study found that temporary removal of state-level restrictions alone is not sufficient for advanced practice nurses to achieve their full scope of practice.

The studies reported in this special issue provide key insights into this workforce and highlight several emerging lessons. First, studies show that advanced practice nursing roles have grown worldwide and have diversified in different specialty areas to be highly adaptive and effective in dealing with unforeseen pandemics such as the Covid-19 pandemic. Second, new studies contribute to the evidence base of advanced practice nursing practice by highlighting the contribution of these practitioners to health outcomes. Third, advanced practice nurses can provide effective and high-quality care, but require enabling policy and work environments to ensure that this workforce can practice effectively.

The special issue also highlights opportunities for future research and policy changes which are needed to maximize the contribution of this key workforce to patient care and health outcomes. Sharing lessons of advanced practice nursing developments globally, policy and practice barriers in new health emergencies and pandemics and evaluating the roles within new models of care and transformed health systems will be critical in the future.

The special issue can be found in our article collections on Science Direct at <https://www.sciencedirect.com/journal/international-journal-of-nursing-studies/special-issue/10T69GPJOWK>.

### Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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