

## Comprehensive Review of Specialized Nursing Roles in Advancing Healthcare Delivery

Asia Ahmed Alasmy<sup>1</sup>, Fatimah Ahmed Alasmy<sup>2</sup>, Bsmah Abdollah Alhamdan<sup>3</sup>, Rehab Ali Mohammed<sup>4</sup>, Fatimah Abdullah Jaber Alshahrani<sup>5</sup>, Amal Ayedh Alruwaythi<sup>6</sup>, Sarah Ayedh Alrowithi<sup>7</sup>, Ameera Suliman Saeed Adawi<sup>8</sup>, Amal Rasheed Alanazi<sup>9</sup>, Ibtisam Hassan Abdullah Alasiri<sup>10</sup>

### Abstract

*Nursing's place in healthcare is changing from a more traditional and static position as healthcare has increasingly focused on specialization in modern times. Advanced nursing roles, including NPs, CNSs, certified registered nurse anesthetists, and clinical nurse educators, have gained growing importance in advancing patient and population health to further increase the accessibility of quality healthcare services as new care challenges arise. This appraisal aims to review the literature on the aspects in which these specialized nursing roles have enhanced the delivery of healthcare. Analyzing the literature and case studies incorporated in the paper reveals these roles' effects on patient outcomes, workforce productivity, and encompassing healthcare organization stability. It also presents the problems associated with employing specialized nurses based on specific regulatory, educational, and financial issues and suggestions about how these professionals can be utilized most effectively in health care.*

**Keywords:** *Specialized Nursing Roles Include Nurse Practitioners, Clinical Nurse Specialists, Healthcare Delivery, Nursing Education, Patient Outcomes, Healthcare Workforce, And Nursing Leadership*

### Introduction

Healthcare systems worldwide are threatened because of the increased patient base, advancement in age, and the prevalence of diseases. Standard patterns of care where doctors primarily provide specialized services are under pressure because of the tremendously increasing demand for care. In the last decades, responding to these challenges, the role of specialized nurses has grown dramatically. Roles like Nurse Practitioners, Clinical Nurse Specialists, Nurse Anesthetists and Nurse Educators are now essential to delivering competent, effective and affordable patient care.

Specialized nurses are independent practitioners with additional training in their chosen field of practice and actual operations. These roles allow nurses to take up further obligations such as diagnosing medical conditions, managing them, and delivering a comprehensive clinical and leadership stream in nursing. As will be outlined in this review, the efficiency of these specialized nursing roles in influencing the health care delivery system, the enhancement of patient status, and the challenges these roles face are critiqued. Furthermore, it shapes them about other roles that compose interdisciplinary healthcare teams and their overall contribution to the healthcare systems' sustainability and efficiency.

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<sup>1</sup> Riyadh Second Health Cluster, Saudi Arabia, Email: as\_asia@icloud.com.

<sup>2</sup> Aseer Central Hospital, Saudi Arabia, Email: fatimahh.93@outlook.com

<sup>3</sup> Aseir health cluster, Saudi Arabia, Email: basiri4@moh.gov.sa.

<sup>4</sup> Al Areen Health Center, Saudi Arabia, Email: rehabrrr60@gmail.com.

<sup>5</sup> Saqa Health Center, Saudi Arabia, Email: falshahrani18@moh.gov.sa

<sup>6</sup> Riyadh first Health Cluster, Saudi Arabia, Email: aalruwaythi@moh.gov.sa

<sup>7</sup> Riyadh Second Health Cluster, Saudi Arabia, Email: salrwithay@moh.gov.sa

<sup>8</sup> Al Areen Center, Saudi Arabia, Email: Asadawi@moh.gov.sa

<sup>9</sup> Riyadh Second Health Cluster, Saudi Arabia, Email: Amralonazy@moh.gov.sa

<sup>10</sup> Aseir health cluster, Saudi Arabia, Email: Ibhallasiri@moh.gov.sa

## Literature Review

The appreciation of the elaborate subfields of nursing has created a rise in research work related to the effects of these roles on patients, the kind of healthcare systems being implemented, and the nursing workforce. In this section, the focus will be on the presentation of other authors' findings concerning the roles of different types of specialist nurses.

- *Nurse Practitioners (NPs)*

Nurse Practitioners are advanced nurses equipped to evaluate, synthesize and treat minor and complex health ailments. They are allowed to do many things that are expected of physicians, including writing prescriptions, performing physical examinations and interpreting the results of different diagnostic procedures. As noted by the Institute of Medicine IOM, NPs are important in increasing access to care because, in many practices, physicians are scarce, particularly in underserved communities. A study by Bernbec, Lee, and Tang (2018) revealed that NPs most benefit primary care practice. Through their practice, they deliver quality care, enhance patient satisfaction, and minimize the costs of health care services. NPs have also been determined to decrease costs such as waiting time and increase the chances of early access to health care, especially for clients in rural and remote areas (Newhouse et al., 2011; Mohammad et al., 2024a; Mohammad et al., 2023a; Mohammad et al., 2024b).

- *Clinical Nurse Specialists (CNSs)*

CNSs are being trained to work in a clinical speciality area, whether cardiology, oncology or paediatrics. They are responsible for directing patients' treatment, offering direction and support to other patients, and providing nurses with the formulation of clinical and recommended practices. Research has shown that CNSs are invaluable in making impressive contributions to patient outcomes, especially when knowledge-intensive care is required. For instance, CNSs have been found to decrease the rate of patient hospital readmission and increase patient satisfaction and the quality of care through principles of clinical management (Barton et al., 2018). Further, they avoid increasing pressure on physicians by empowering themselves to explicate patients' instructions, directions, and information by preparing them to bear higher levels of responsibility for patient education, care, and management.

- *Nurse Anesthetists (CRNAs)*

Nurse Anesthetists are advanced practice nurses who work as experts in managing anaesthesia during operations. Besides providing anaesthesia, they are sometimes required to safeguard patients' lives during anaesthesia, take necessary checks on the patient's physiologic parameters, and deal with any emergency. CRNAs work in several sub-specialities in practice areas such as surgery, labour and delivery, and pain management. According to the given literature, CRNAs offer services in anaesthesia that are as effective, if not better, than anesthesiologists (Spector et al., 2019). The roles of CRNAs in healthcare teams have been embraced because of their benefits, which include the reduction of anaesthesia complications and vice versa.

- *Nurse Educators*

Nurse educators are involved in driving change in progress in the healthcare delivery system by preparing new nurses. They educate clinical and didactic nursing students in universities and colleges and offer ongoing education to practising nurses. Given the steady expansion of the adoption of innovative care techniques in the current society, the responsibility of nurse educators to prepare the nursing workforce for current seminal tasks has been amplified. Existing literature underscores the need for nurses to update their practices to advance knowledge of medical innovations, treatments, and evidence-based practice (Giddens et al., 2018). Another important role nurse educators play is to mould leadership and advocacy among nursing learners and practitioners.

## Methods

For this review, qualitative and quantitative data collected from peer-reviewed articles, case studies and healthcare reports were considered and compared. The databases that we used included PubMed, CINAHL, and Google Scholar. The articles published from 2010 to 2023 were included in the current study. The eleMH used to identify articles include Controlled for peer-reviewed studies, systematic reviews, meta-analyses and peer-reviewed articles that examined specialized nursing roles and implications for practice. We also provided case studies where issues related to specialized nurses were shown to enhance patients' status and healthcare operations.

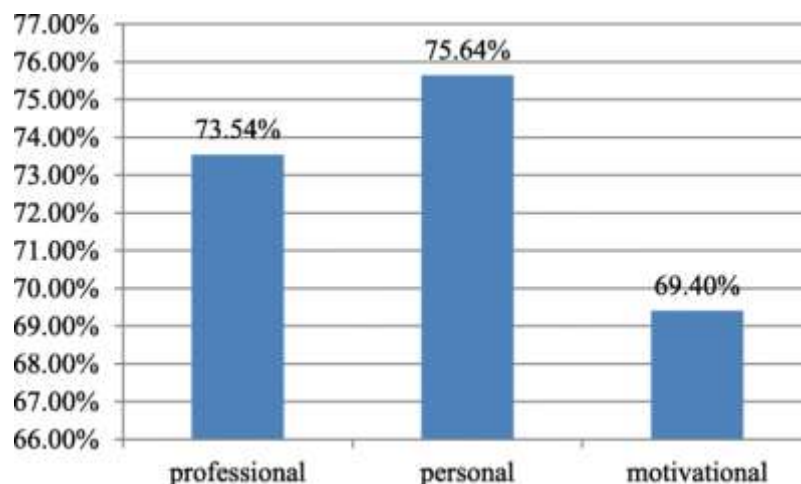
From the collected data, we analyzed findings according to the following themes: outcomes for patients receiving care from specialized RN roles, access to healthcare for vulnerable populations, nursing workforce implications of full role implementation, and barriers to scope of practice expansion. This synthesis was helpful in providing an integrated picture of the current literature on specialized nursing roles in the development of healthcare.

## Results and Findings

### *Specialized nursing roles create a positive impact on patients*

As a matter of analysis, specialized nursing roles improve patients' outcomes. There is also evidence that competitive scopes of practice of NPs and CNSs include accessing, diagnosing, and treating chronic health conditions and prescribing medications with similar results as a physician. In primary care, NPs act as gatekeepers since they are mostly the first Healthcare providers that patients interact with and help increase patient satisfaction without necessarily attending emergency cases (Buppert, 2021). Furthermore, analyzing the CNS' practice in a hospital environment, it is evident that various complications, including readmissions and length of stay, are lowered (Barton et al., 2018; Mohammad et al., 2023b; Al-Hawary et al., 2020; Al-Husban et al., 2023).

#### *Specialized Nursing Roles Create a Positive Impact on Patients*



#### *Workforce Sustainability*

This means that specialized nursing roles are significant in solving the workforce shortage, especially in rural and low-population-density areas. Studies suggest that NPs have been found to offer the essential service of primary care, thus taking some pressure off physicians. NAVNs and CNSs also meet specific needs and discharge fastidious services to clients without overburdening the available workforce of

physicians (IOM, 2011; Al-Nawafah et al., 2022; Alolayyan et al., 2018). These roles help to create a better picture for a sustainable healthcare workforce, thus helping systems within organizations to run even with inadequate human resources.

*The scope of practice of specialized nursing roles has also demonstrated cost-effectiveness and increased access to care*

The research indicates that NPs and CRNAs cut the expenses throughout treatment by managing duties that used to be done by a doctor at an equivalent or higher level of quality. Some benefits of extending the use of NPs in underserved communities include healthcare access, which relieves pressure off the emergency department (Newhouse et al., 2011; Alzyoud et al., 2024; Mohammad et al., 2022; Rahamneh et al., 2023).



### *Challenges to Further Development*

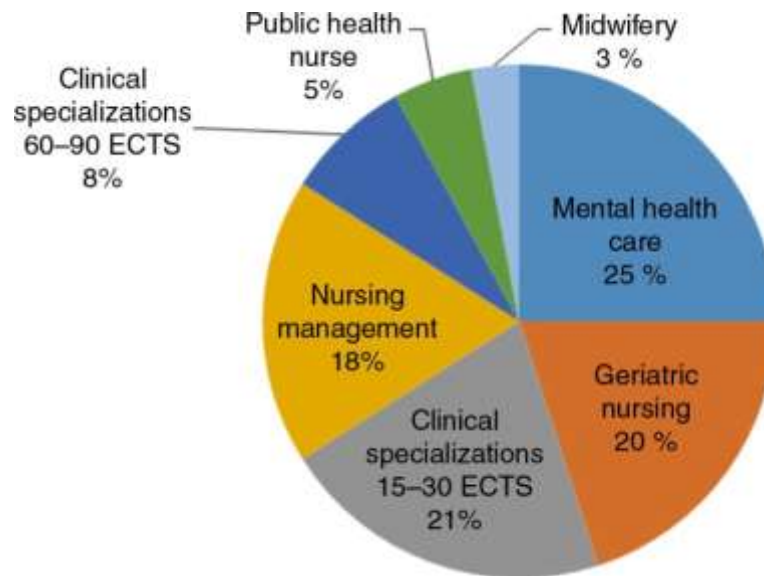
Although specialized nursing roles have apparent advantages, there are some limitations to their complete implementation. Pharmaceutical regulatory policies and policies that regulate the practice of professionals, known as scope-of-practice laws, for example, restrain the independence of nurse practitioners and CRNAs in some states and countries respectively. The absence of financial incentives for some of the nursing services also puts a check on the expansion of differentiated nursing positions. Moreover, advancement in education and professional training in nursing is still constrained for some nurses, especially in the developing world (Spector et al., 2019; Al-Azzam et al., 2023; Al-Shormana et al., 2022; Al-E'wesat et al., 2024).

### **Discussion**

As the results of this review suggest, speciality nursing roles are how to contribute to the progress of healthcare systems. Nurse practitioners, CNSs, CRNAs, and nurse educators deliver patient care outcomes and cost-effective care for the increasing and ageing population. These positions are vital for assuring quality patient care in multiple care delivery arenas, including primary and speciality care, as well as inpatient and intensive care. Yet, several barriers prevent specialized nurses from being successfully integrated into the body of the health workforce; these hurdles include legal restrictions, funding, and lack of sufficient programs for education.

*Challenges that Hinder Full Integration of Specialized Nurses*

One of the major obstacles to utilizing specialized nurses in healthcare settings is the question of regulation; regarding the features of ANPs, including NPs and CNSs, the legislation in many countries and regions is still either inadequate or sufficiently permissive. In some states, NPs are expected to practice under an agreement with the physician and thus cannot practice independently despite their autonomy in practice and specialized knowledge of diseases. This forms a stumbling block in accessing health care, especially in areas where elderly people, mid-reproductive women, and children and those in rural areas where it usually takes time for a physician to be available.



Several empirical investigations indicate that NPs can deliver optimally competent care that is on par with physicians in such important clinical categories as primary and chronic care (Buppert, 2021). Nevertheless, legal barriers restrict the practice of NPs to the extent of their education and experience in responding to a rising need for healthcare services. The practice skills of NPs have qualified the case for full practice authority just as some states in the U.S., where the practice of NPs has been proven to extend access to care, reduce the cost of healthcare service and increase the satisfaction of patients (IOM, 2011). Regulatory challenges for CNSs may be in the form of scope of practice limitations that limit CNSs' ability to coordinate care or make clinical decisions in specialized fields that CNSs are chosen for.

However, the idea of the full inclusion of these specialized nurses in the health care human resources force entails policy change. Exact which legislative changes will support the goal that NPs, CNSs, and other APRNs should be allowed to practice independently, prescribe medications and assume leadership roles in managing patient care. It will be the responsibility of the professional associations to continue to lobby for implementing the above changes at both state and national levels to ensure that healthcare organizations are ready to accommodate specialized areas of nursing.

*Position-Specific Specialization: Effects and Financial Constraints*

The fourth and final type of hindrance to expanding and implementing specialized roles for nurses is cost. In most healthcare organizations, especially those funded by the government, specialized nurses sometimes struggle to compensate for their services. This is especially true in countries where such personnel are not fully compensated by insurance companies and other state programs, such as Medicare, especially Nurse Practitioners and Nurse Anesthetists. Thus, failure to offer reasonable financial compensation means that healthcare organizations might hesitate to further develop such roles or resort to involving physicians alone, even when nurses can provide them carefully (Naylor & Keating, 2018).

Many studies have even proved that the utilization of NPs and CRNAs inclines to decrease healthcare costs since they offer effective and cheaper services than physicians (Spector et al., 2019). For instance, there is good evidence that anaesthesia care provided by Nurse Anesthetists is as safe, if not safer, than that offered by anesthesiologists and sometimes cheaper (Mills et al., 2020). CNSs play an equally critical role in preventing readmissions, enhancing patient health, and implementing efficient population care through handling composite problems and cost-effective health facility utilization.

To overcome the financial factors, reimbursement strategies in healthcare systems have to adopt various disciplines that offer high value by specialized nurses. This entails promoting full reimbursement for NPs, CRNAs, and other advanced practice nurses and ensuring patients are covered for all those services NPs, CRNAs, and other advanced practice nurses are to offer, inclusive of diagnosis, prescription and anaesthesia management. Moreover, promoting health insurance policy reforms to reflect the importance of such positions to the healthcare economy is crucial for the continuity of those positions in the system.

#### *The Educational and Professional Development Needs of the Participants Include*

With the increasing need for speciality nursing services, there is a need to increase the education and training of nurses to meet the demands of special nursing care. Healthcare is a dynamic field of contracting, while technological, therapeutic, and care advancements must be in tandem with the care of patient care professionals. To this end, the educational programs for advanced practice nurses need to be developed and updated further. This involves expanding the possibility for nurses to attain postgraduate certifications, including cardiology, oncology, anaesthesia, or other renewals, which ensures that the nurses are up to date on the current clinical practices and devices.

Nurse educators are also strategic in determining the kind of workforce in the future. They are responsible for preparing nurses for APR roles and equipping them with appropriate knowledge and skills to practice specialized nursing. However, there is a rising demand for educational preparation in nurse educators to train future advanced practice nurses. Another feature of the general tendency of the development of healthcare systems, especially considered from the point of view of the role of specialization of the work of nurses, is the fact that educational institutions need to pay much more attention to the preparation of faculty and the consideration of the corresponding resources.

Tutorship and leadership advancement also need to be implemented to enhance the careers of specialized nurses. These programs offer the nurse the direction and tools necessary to manage the challenges of practising nursing, management, and nursing administration. In addition, actual mentorship can reduce the level of burnout of the specialized nurses and increase the general level of job satisfaction of the professionals, which would be beneficial in maintaining the same level of quality service delivery as experienced to date.

#### *Interdisciplinary Collaboration as the Concept*

To complement the reform activities on the public health regulatory and financial front, there is a need to culturally integrate interdisciplinary teaming in/support of health care organizations. Specialized nurses should cooperate with physicians, therapists and other healthcare team members to serve the patient's needs. Multidisciplinary work has been reported to help achieve better results for patients, provide better interactions, and foster better safe care practices. This paper finds that when specialized nurses are included as members of interdisciplinary healthcare teams, their contributions can be better mobilized and understood to benefit patients.



(Day, Millner, & Johnson, 2016)

However, barriers to cross-system communication may consist of separations within a healthcare organization and differences in educational programs. To address these challenges, healthcare organizations need to cultivate respect for nurses and effective collaboration that fully integrates the contributions of nurses and other health providers. Hospital collaboration training should also be part of the training curricula for nurses and other healthcare team members so that effective communication can be observed.

## Conclusion

There is no doubt about how specialized nursing roles have contributed to enhancing health care provision. Nurse Practitioners, Clinical Nurse Specialists, Nurse Anesthetists, and Nurse Educators are needed to advance the science of nursing and to increase the quality of patient care and access to care while decreasing costs. However, more deliberation with aims to attain the integration of these roles into the healthcare workforce is still hampered by several barriers, including few and stringent legislative measures, availability of little funding for healthcare roles, and the requirement of additional investment in healthcare education and professional development. As a result, a dynamic shift towards eliminating these barriers through policy reforms, financial change, and education is invaluable in the optimized use of specialized nurses to enhance health delivery.

## Recommendations

**Advocacy for Policy Reform:** Inspiration should be made to support the expansion of the role of NPs, CNSs, and other advanced practice nurses by changing the scope of practice laws to allow the degree of practising from those trained as NPs, CNSs and other advanced practice personnel. This includes full practice authority for NPs in all the states and countries.

**Reimbursement Models for Specialized Nurses:** According to reimbursement policies, healthcare systems should fully reimburse all NPs, CRNAs, and other advanced-level practice nurses. This will help maintain those positions within organizations and facilitate their continued expansion.

**Expansion of Educational Opportunities:** Education institutions should develop additional training and certification options for advanced practice nurses by improving the speciality NP role. Furthermore,

funding commitment should be escalated to improve the enrolment of nurse educators and address the increased need for advanced practice nurses (Aitken & Marshall, 2018)

**Fostering Interdisciplinary Collaboration:** It is ideal for healthcare organizations to encourage interdisciplinary practice that acknowledges and values knowledge from specialized nurses. These encompass raising awareness and enhancing linked knowledge, as well as the ability of healthcare personnel to interact with one another fully.

The recommendations mentioned can help specialized nurses use their expertise, maintain their significant position in developing health care systems, and produce productive patient care results.

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