

Impact of Clinical Nurse Specialist Roles on COVID-19 Pandemic Care

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Advanced practice nurses including nurse practitioners, clinical nurse specialists (CNS), certified registered nurse anesthetists, and certified nurse midwives contribute in many ways to improve care in the intensive care unit. This article reports on the roles of the CNS at an academic medical center and how they contribute to improving patient outcomes and support critical care nursing practice during the COVID-19 pandemic.

Keywords: advanced practice nursing, critical care, clinical nurse specialist, COVID-19, pandemic

OVERVIEW

Global cases of COVID-19 continue to increase despite mitigation and containment efforts. Advanced Practice Registered Nurses (APRN) represent a growing number of nurses practicing in various roles that are helping to meet the healthcare needs of patients, including those affected by the pandemic. In the United States (U.S.), there are four traditional APRN roles including nurse practitioners (NP), clinical nurse specialists (CNS), certified registered nurse anesthetists (CRNA), and certified nurse midwives (CNM). APRNs are educated at the graduate degree level, either at the master's or doctoral level, and majority of the U.S. states require national certification and a separate licensure. The literature contains many examples of APRN roles including the impact that they have on promoting healthcare access and positive outcomes for patients (Kleinpell et al., 2019; Lopatina et al., 2017; National Association of Clinical Nurse Specialists, 2020; Woo et al., 2017). APRN roles in critical care include providing direct care to

patients and contributing to patient care management, providing education and clinical support to bedside nurses, providing consultation in areas of expertise, such as managing wound care, and collaborating with the multiprofessional intensive care unit (ICU) team, among other aspects of care (Kleinpell et al., 2019; Lopatina et al., 2017; Woo et al., 2017).

A recent report from the U.S. Department of Health and Human Services, Health Resources and Services Administration, National Center for Health Workforce Analysis addresses how the novel Coronavirus disease 2019 (COVID-19) pandemic has impacted healthcare, and cites the role of APRNs, who are uniquely positioned to lead and support strategies for epidemic and pandemic responses (Health Resources & Services Administration, 2020). Due to the pandemic, a number of U.S. states have issued executive orders which waived some of the restrictions to APRN practice in order to promote increased healthcare access (American Association of Nurse

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Practitioners [AANP], 2020). Examples include enabling APRNs to have prescriptive privileges, suspend requirements for a physician collaborative agreement, or waive the requirement for physician review of documentation or the requirement for a collaborating physician to visit remote sites monthly (AANP, 2020).

At a Midwestern academic medical center in the United States, APRNs are practicing in a variety of roles including unit based and service based roles. With the ongoing pandemic, APRN roles have also further evolved. This article highlights several ways in which APRNs, specifically CNS's, are contributing to adapting care processes during the pandemic.

CNS Role

The CNS is an established APRN role with demonstrated impact on healthcare quality (National Association of Clinical Nurse Specialists, 2020). The CNS role was created by the nursing profession to address the increasingly complex needs of patients (National CNS Competency Task Force, 2010). The CNS is an expert clinician,

consultant, and a leader in implementing best practices for clinical care. The literature highlights key roles of the CNS in critical care in helping to prevent hospital-acquired conditions such as pressure ulcers, falls, and infections such as central line associated bloodstream infections (CLABSI) and catheter-associated urinary tract infections (CA-UTI), as well as improving care by helping to implement evidence-based care protocols for aspects of ICU care such as early identification and treatment of sepsis (National Association of Clinical Nurse Specialists, 2020)

With the advent of the COVID-19 pandemic, the impact of the CNS role has been further illuminated. Examples of ways in which the CNS role is making a significant impact on patient care during the pandemic include staff education and support related to the use of personal protective equipment (PPE), development of surge-staffing models, prevalence for quality measures, and manual proning both in a traditional and awake patient developing protocols and education, among other initiatives.

TABLE 1. Examples of CNS Contributions to Address the COVID-19 Pandemic

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- Developed COVID toolkit—new clinical workflows
 - Standardized and elevated clinical practices through interdisciplinary leadership connection
 - Emergency department infrastructure changes related to COVID-19 to coordinate and transfer care safely and efficiently
 - COVID-19 clinical materials
 - Supporting standardized education and order set creation
 - COVID-19 binders in patient care areas for nurse reference
 - Adopt evidenced-based practice changes into clinical practice
 - PPE training and workflow standardization—collaboration with interdisciplinary teams and professional nursing practice
 - Created and evaluated innovative surge-staffing models across care continuum.
 - Benchmarked and designed strategies for IV pumps to be outside patient rooms while maintaining and evaluating quality patient care
 - Partnered with interdisciplinary team to assist with implementation and education of manual proning of patients to improve patient outcomes
 - Collaborating with an interdisciplinary team to maximize intermediate care unit (IMCU) bed utilization to decompress ICU beds
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TABLE 2. Lessons Learned to Address Ongoing Clinical and Educational Challenges Related to the COVID-19 Pandemic

- Communication is essential in leading the pandemic response in the ICU: key stakeholders including administration, clinical directors, front-line clinical staff, support staff and others
 - Educational needs of staff are ongoing and require focused efforts by the CNS to ensure that all staff are aware of new protocols, changes in policies, and incorporation of new evidence
 - Just-in-time learning, an approach to individual or organizational learning and development that promotes need-related training be readily available is useful to integrate
 - Rapid cycle tests of change are useful in integrating new policies and protocols into clinical care
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Institutional Exemplar

The role of the CNS is integral to improving patient outcomes through interdisciplinary collaboration and patient advocacy. This advanced practice role focuses on driving and evaluating practice changes across the continuum of care, while supporting the practice and professional development of bedside nurses. The CNS role was vital throughout the COVID-19 pandemic, due to the crucial need for innovation, rapid change implementation, and continuous evaluation taking place. Initially the CNS team had an active role in the development of PPE training to help staff navigate the uncertainty of a new virus. With the teamwork of CNS and our professional nursing practice department, we created a roaming team to do “just-in-time” PPE education and demonstrations. CNS’s were involved in the frontlines of this training initially, however after creation and tools were set in place this project was handed off to our professional nursing practice partners to transition CNS’s to other quality initiatives.

The CNS team served as key stakeholders in the development and implementation of the surge-staffing model. During the surge, the decision implemented by leadership was to hold elective surgical and procedural cases, resulting in nursing staff availability for redeployment to ensure nursing resources were reallocated to areas of highest need. The CNS team worked together across multiple care areas to train and prepare redeployed nurses temporarily working

in unfamiliar units, including those designated for COVID-19 patients, as well as high-acuity areas in need of additional staff. This included redeployed nurses who previously worked in ICUs to be primary nurses during COVID-19 (www.aacn.org). To achieve this an abbreviated orientation occurred with an orientation checklist created by the CNS team that was reviewed with evidence-based materials from the American Association of Critical Care Nurses (AACN) COVID-19 education resources. Team nursing models were structured and developed in order to fully utilize each nurses’ skillset while they practiced outside their usual care area created utilizing SCCM guidelines as a reference. Unit specific tip sheets were created and placed outside each patient room to serve as “just-in-time” resources for all staff entering the room of what was expected from them while caring for COVID-19 patients (e.g., of tip sheet) (www.sccm.org). The CNSs rounded daily to ensure nurses felt comfortable and prepared. The CNS team created materials and new workflows for charge nurses, to utilize in the absence of CNS presence, to meet with the redeployed nurses prior to the start of their shift to review and ensure awareness.

The changes to staffing models to support the influx of critically ill COVID-19 patients had a direct impact to quality indicators. The CNS team collaborated with interdisciplinary team members to streamline workflows enhancing staff safety and efficiency. Quality outcomes, including

Figure 1. Clinical nurse specialists team at Rush University Medical Center, Chicago, Illinois, USA.



Back Row (from left to right): Kristen Fisher DNP, APN, AGACCNS-BC, CCRN-K—11W Neuroscience Intensive Care; MaryCarol Racelis MSN, APN, ACNS-BC—13E and 13W Orthopedics, Neuroscience, ENT; Jessica Margwarth MSN, RN, AGCNS-BC—7S and 7N Atrium General Medical-Surgical; Kathie Posa-Kearney MSN, APRN, ACCNS-AG, CCRN—11E Cardioscience Intensive Care; Elizabeth Hallberg MSN, APRN, ACCNS-AG, CCRN-K—12 W Neurosciences and Intermediate Care; Addy Caprio MSN, APN, ACCNS-N, RNC-NIC—Neonatal Intensive Care; Erin Dowding MSN, APN, ACNS-BC, OCN—14E and 14W Hematology-Oncology, Stem Cell Transplant; Samantha Aranda MSN, APN, ACCNS-AG, CCRN—Clinical Staffing Office, CCOT, R-VAT; Beth Day MSN, APN, CCNS, CCRN—10W Surgical/Medical Intensive Care.

Front Row (from left to right): Barb Gulczynski DNP, APN, CNS/CNP—10E Medical Intensive Care; Shirley Ambutas DNP, APN, CCNS, CCRN-K—JRB Acute Rehab 5 and 6; Emily Brey CDE, MSN, RN, AGCNS-BC—Diabetes; Megan Gross DNP, ACCNS-AG, CCRN—Interventional Services; Marites Gonzaga-Reardon DNP, APRN, CCNS, CEN—Emergency Department; Laura Johnson MSN, APN, AGCNS-BC, BMTCN—Cancer Center; Vera Clinton DNP, APN, ACNS-BC—9N and 9S Atrium General Medicine.

pressure injuries and infections related to central lines and urinary catheters, were greatly affected by the COVID-19 pandemic. The spike in health-care associated events (HAE) led the CNS team to evaluate how COVID-19 care practices affected the traditional standard of care. Several therapies, namely manual proning, prevented the staff nurses from adhering to evidence-based interventions. The prone position and overall clinical condition of these patients prevented routine position changes and central line maintenance and assessment. Additionally, urinary catheters

were challenging to secure appropriately, and the patient's position led to urinary pooling within the bladder. Once these issues were identified, the CNS team worked to mitigate the risk for Collaboration with various specialty teams such as wound ostomy nurses, infection preventionists, vascular access nurses, and staff nurses led to the implementation of preventative strategies.

Our intensive care CNSs, along with the medical ICU education committee, were instrumental in the development, implementation, training, and

continuation of a hospital-wide proning protocol and prone team. Multidisciplinary staff, including nurses, respiratory therapists, physicians, technicians, and advanced practice providers, participated in both simulation-based and real-time training during the beginning of the COVID-19 surge. This allowed all adult intensive care staff to feel confident in the ability to provide the highest level of evidence-based care for the increasing number of high-acuity patients.

Other key roles included developing supporting standardized education, designing strategies for intravenous (IV) pumps to be outside patient rooms while maintaining and evaluating quality patient care, assisting with infrastructure changes in the emergency department, among others (Table 1).

CONCLUSION

APRNs, including CNSs are key advanced practice nursing roles that have and continue to support nursing practice during the COVID-19 pandemic. To support the healthcare providers in the front line, CNSs are at the forefront with operational leadership in discussion, planning, and education related crisis standards of care. This included involvement in the development of guidelines, policies, and workflows for infrastructure, staffing, and surge where available resources restricted the ability to apply the usual standards of care such as PPE, education of novel testing and equipment to manage and provide quality care for patients. The pandemic provides an opportunity to highlight the impact of APRN roles and their contributions to patient care. Lessons learned have included the importance of communication and ongoing education to address challenges related to the pandemic (Table 2). This institutional exemplar highlighted several ways that CNSs supported direct patient care and nursing staff education and clinical practice support during the COVID-19 pandemic.

REFERENCES

- American Association of Critical Care Nurses. (2020). *COVID-19 pulmonary, ARDS and ventilator resources*. -ventilator-resources"href="https://www.aacn.org/education/online-courses/covid-19-pulmonary-ards-and-ventilator-resources">https://www.aacn.org/education/online-courses/covid-19-pulmonary-ards-and-ventilator-resources
- American Association of Nurse Practitioners. (2020). *COVID-19 state emergency response: temporarily suspended and waived practice agreement requirements*. <https://www.aanp.org/advocacy/state/covid-19-state-emergency-response-temporarily-suspended-and-waived-practice-agreement-requirements>
- Health Resources & Services Administration. (2020). *Characteristics of the U.S. Nursing workforce with patient care responsibilities: Resources for epidemic and pandemic response*. <https://bhwh.hrsa.gov/data-research/access-data-tools/national-sample-survey-registered-nurses>
- Kleinpell, R. M., Grabenkort, W. R., Kapu, A. N., Constantine, R., & Sicoutris, C. (2019). Nurse practitioners and physician assistants in acute and critical care: A concise review of the literature and data 2008-2018. *Critical Care Medicine*, 47, 1442–1449. <https://doi.org/10.1097/CCM.0000000000003925>
- Lopatina, E., Donald, F., DiCenso, A., Martin-Misener, R., Kilpatrick, K., Bryant-Lukosius, D., & Marshall, D. A. (2017). Economic evaluation of nurse practitioner and clinical nurse specialist roles: A methodological review. *International Journal of Nursing Studies*, 72, 71–82. <https://doi.org/10.1016/j.ijnurstu.2017.04.012>
- National Association of Clinical Nurse Specialists. (2020). *Impact of the clinical nurse specialist role on the costs and quality of health care*. <https://nacns.org/advocacy-policy/position-statements/impact-of-the-clinical-nurse-specialist-role-on-the-costs-and-quality-of-health-care/>

National CNS Competency Task Force. (2010). *Clinical nurse specialist core competencies*. <http://www.nacns.org/docs/CNSCoreCompetenciesBroch.pdf>

Society of Critical Care Medicine. (2020). *COVID-19 resources for Non-ICU clinicians*. <https://covid19.sccm.org/nonicu/>

Woo, B. F. Y., Lee, J. X. Y., & Tam, W. W. S. (2017). The impact of the advanced practice nursing role on quality of care, clinical outcomes, patient satisfaction, and cost in the emergency and critical care settings: A systematic review. *Human Resources for Health, 15*, 63. <https://doi.org/10.1186/s12960-017-0237-9>

Disclosure. The authors have no relevant financial interest or affiliations with any commercial interests related to the subjects discussed within this article.

Acknowledgment. The CNS team at Rush University Medical Center in Chicago Illinois, USA, is acknowledged for their ongoing work efforts (Figure 1).

Funding. The author(s) received no specific grant or financial support for the research, authorship, and/or publication of this article.