NACNS White Paper on Telehealth Competency for the Clinical Nurse Specialist: Gap Analysis and Recommendations

From the Telehealth Workgroup of the NACNS Professional Development Committee August 2021

The National Association of Clinical Nurse Specialists (NACNS) supports and advocates for the role of the Clinical Nurse Specialist (CNS) in the provision of telehealth services. The diversity of CNS roles and practice settings creates challenges in precisely defining how telehealth is incorporated into the CNS role. Nevertheless, CNS practice foundations support competencies related to telehealth across the spheres of impact: direct patient care, nurses and nursing practice, healthcare systems and organizations. As one of the four advanced practice registered nursing (APRN) roles, CNSs lead healthcare and develop innovative and effective care solutions, including telehealth, in diverse healthcare settings to improve outcomes. This paper will use the broader term *"telehealth"* to encompass nursing practice across the continuum of health and healthcare.

BACKGROUND

Telehealth and telemedicine have been defined by many health organizations and regulatory agencies, including the Health Resources Services Administration,[1], the American Telemedicine Association[2], the American Nurses Association[3], and the American Academy of Pediatrics.[4] The common components of telehealth definitions are the use of electronic information exchange and applications/technologies to provide healthcare services remotely, versus face-to-face. The words *telemedicine* and *telehealth* are sometimes used interchangeably. Still, *telemedicine* refers to a limited subset of telehealth that specifically includes clinical services. *Telehealth* also describes non-clinical services such as provider training or health education.[5]

History

Telehealth and telemedicine's origin has its roots in the National Aeronautics and Space Administration, with remote monitoring of astronauts' health during crewed space exploration.[6] The subsequent development of modern technologies was accompanied by slow growth in telehealth use. Telehealth usage rapidly expanded with the onset of the COVID-19 pandemic due to the resultant public health emergency and need to implement isolation measures in healthcare settings.[7] The COVOD-19 pandemic validated telehealth as a beneficial tool in disaster management and as an efficient mechanism to provide, safe, effective, and accessible care. Regulatory accommodations to facilitate telehealth were implemented within weeks of pandemic-related isolation measures, allowing continuous delivery of healthcare via remote technology.[8]

Current Trends

Historically, telehealth platforms were used within various settings, including primary care, acute care, long-term care, mental health, and school health, as well as multiple specialties such as dermatology, cardiology, neurology, pediatrics, psychiatry, and emergency medicine.[9–13] Telehealth bridges physical distance for rural or community-dwelling patients and provides opportunities for these patients to receive timely healthcare services.[12] For example, CNSs provide care for rural patients by engaging in videoconferencing to remotely monitor blood pressure or blood glucose, and examine home movements with activity monitors.[14] Patients cite convenience and decreased costs as the primary benefits of telehealth and report overall satisfaction with video visits.[15] A recent United States Department of Veterans Affairs study found that telehealth care, compared to traditional face-to-face care, saved patients an average of 145 miles of travel and 142 minutes per visit.[16] During the height of the COVID-19 pandemic, telehealth was also beneficial in conserving personal protective equipment for healthcare providers while offering patients a way to connect with healthcare services and limit potential exposure to disease.[17]

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Telehealth Challenges

Despite literature supporting the benefits of telehealth, many obstacles exist to its ubiquitous adoption. The technology-acceptance gap in older patients may present a large barrier, as the reluctance is congruent with patient preference.[18] However, it is essential to consider that older adults may have varying degrees of comfort and capability with online platforms and technology. Patients with language barriers may need an interpreter, and studies show that when language barriers exist, video interpretation is more effective than telephonic interpretation.[19] Cultural components of health, such as family structure and decision-making, are vital assessments but may be challenging to incorporate into telehealth settings.[20] Although Internet use is widespread, it is important to consider that some individuals who are socioeconomically disadvantaged or those who reside in very rural areas may not have access to Internet services or online platforms. Telehealth may not meet the needs of these vulnerable individuals and families and thus they may benefit from audio-only services.

For CNS providers utilizing telehealth, challenges may occur in establishing authentic, caring relationships with patients, because interaction is limited to an audio and video presence on a screen.[21,22] Non-verbal indicators may be more challenging to identify in online interactions, potentially clouding provider and patient interpretations of the communication. CNS providers need to possess high-level skills in critical thinking and communication to compensate for the lack of physical connection during telehealth visits.[23]

Regulatory barriers also exist for providers, as the rules defining and regulating telehealth and APRN practice vary from state to state and by organizations. Reimbursement for telehealth services also varies across states and may be linked to demonstrated telehealth expertise.[12,22,24]

Telehealth Competency

Telehealth skill development is incorporated into some APRN curricula via didactic and simulation learning, although more so for nurse practitioner students than for CNS students.[25–27] The COVID-19 pandemic also led to the use of telehealth as a medium for clinical practice hours in some APRN programs. Training of telehealth providers and others outside of their academic preparation for entry into practice has not been reported, although several organizations have developed telehealth competencies.[14,20,21]

Unfortunately, most nurses are insufficiently trained to use telehealth technology to its full potential.[14] In healthcare settings, training interdisciplinary staff and implementing telehealth, like other new ventures, often becomes the unit-based or population-focused CNS's responsibility. The COVID-19 pandemic is an example of a situation that required rapid-cycle performance change to provide resources and training for staff to integrate telehealth technology into clinical practice. Despite the recent surge in telehealth interest and usage, there is a deep gap in the literature regarding telehealth competency and the role of the CNS.

ROLE OF THE CNS

CNS Areas of Expertise

CNS expertise is critical in delivering safe, effective, and ethical care across different populations and healthcare settings. Improving outcomes through the integration of telehealth programs, focusing on both improved quality and access to care, lies within the CNS scope of practice. As APRNs working with patients and families, nurses, and healthcare systems, the CNS's skills in leadership and change management are crucial to develop innovative and effective care solutions. Implementation of a new telehealth program has multiple considerations, including effectiveness and quality of care, cost, acceptability to the patient, usability of the technology, and patient privacy.[9,28] CNSs are uniquely poised to utilize their clinical expertise and proficiency in program development to address telehealth barriers and ensure that telehealth programs are ready for implementation. CNSs lead and guide interdisciplinary telehealth teams to ensure that newly developed telehealth programs are patient-centered, produce excellent outcomes, and effectively designed for healthcare providers in both large and small healthcare systems.

The CNS's acumen of evidence-based practice, needs assessments, and adult learning principles are essential to assess the educational needs of patients and healthcare providers regarding telehealth. As a result, the CNS designs appropriate educational interventions to facilitate telehealth competency and effective incorporation of telehealth into clinical settings. CNSs lead evaluation of patient and systems outcomes associated with telehealth, such as healthcare cost, reduction in hospital admission or emergency department utilization, improvements in health markers such as glycated hemoglobin, or patient satisfaction. Additionally, the CNS is proficient in leading performance improvement outcome initiatives.

The CNS Role

The CNS's role in telehealth may also be as an advanced practice provider in an acute, post-acute, ambulatory, or community/public health setting, utilizing telehealth modalities including synchronous, asynchronous, or remote monitoring of patients and clinical data.[29] The CNS's expertise as an advanced practice provider allows for further extension of telehealth nursing in assessment, diagnosis and treatment of patients with acute and chronic illness, ordering and interpreting diagnostic tests, and prescribing pharmacologic and non-pharmacologic treatment.[30] Although there is growing concern for the thoroughness of patient assessment in telehealth visits and potential impact on care delivery, the CNS functioning as an advanced

practice provider uses advanced health assessment skills to ensure that delivery of care through telehealth technologies meets the standard of care and is safe, effective, and beneficial to patients.[31]

CNS educational preparation and clinical experience contribute to establishing both the clinical appropriateness and effectiveness of specific telehealth programs in different healthcare settings and within varied patient populations. Telehealth competencies aligned with current CNS competencies or added as additional competencies maintain the clinical relevance and quality of CNS graduate programs and clinical practice sites. Telehealth may be integrated into CNS graduate programs in each of the spheres of CNS impact through clinical experiences with a preceptor experienced in telehealth, simulation clinical experiences, or didactic course content through learning objectives. As an expert, the CNS is at the forefront of determining telehealth's evolving future direction. CNS competencies for telehealth fall under each of the three spheres of CNS impact described as follows.

PATIENT DIRECT CARE SPHERE OF IMPACT

As an advanced practice provider, the CNS must embrace telehealth to affect patient and family-centered care positively. The CNS adopts a holistic approach to ensure excellent care for patients and families. As an innovator, the CNS endorses the use of telehealth in appropriate settings. Incorporating CNS telehealth competencies into the Patient Direct Care sphere of impact guides the CNS's facilitation to promote health and wellness for patients and families. The CNS directly interacts with the patient and family to ensure that telehealth use protects the patient's privacy, confidentiality, and security of healthcare information as described in the Healthcare Information Portability and Accountability Act of 1996.[32,33] Additionally, the CNS considers the patient's and family's opportunities to increase healthcare access, especially for those in rural or underserved areas, or those with transportation challenges.

Diversity, Equity, and Inclusion in Telehealth

Like healthcare literacy, digital literacy is key to communicating with patients and families, and managing their healthcare. Digital literacy is defined as "the ability to use and understand information from a digital device with those who are already less likely to use digital health tools."[34] Digital literacy inequity is particularly evident in vulnerable or underrepresented minority populations, such as older adults, those who live in rural settings, those with lower socioeconomic status, or those with limited English proficiency.[34] The surge in telehealth use during the COVID-19 pandemic has highlighted the disparities in telehealth capability within these vulnerable groups.

The CNS proactively evaluates and addresses noted disparities in access to telehealth. According to Pew Research[35] data, in 2019 93% of Americans used Internet services, and 77% used broadband Internet in the home. Those who live in rural areas and those with lower income and education levels were less likely to have broadband services in their homes. Additionally, patients with racial or ethnic minority backgrounds had lower adoption and use of broadband Internet services (White 80%, Back 71%, Hispanic 65%).[35] The CNS screens all patients prior to the initial and ongoing encounters regarding capabilities for and potential barriers to accessing, using, and engaging in the telehealth encounter. Telehealth strategies include audio or video conferencing, video visits, and Internet patient education materials.[34] Patient portals are platforms organizations use to communicate with patients and engage them in their care. However, vulnerable populations with access inequities are less likely to use patient portals because of limited access or limited digital literacy.[34]

The CNS promotes collaboration and coordination of care centered on identifying patient needs via telehealth. Communication between the patient and the CNS improves with integrating human factors related to telehealth, such as projecting empathy and incorporating social determinants of health.[36,37] Additionally, the CNS ensures that adequate language interpreters or technology is available to facilitate successful encounters for those with language barriers.

Engaging the Patient in Telehealth

The CNS provides patient education to promote knowledge and understanding of telehealth, utilizing different educational methods to meet patients' individual needs such as health literacy level, language, learning needs, readiness to learn, and cultural values and beliefs. Patient education encompasses the benefits of telehealth, such as decreasing healthcare costs and providing appropriate and timely patient care.[37,38]

The CNS applies measures to enhance the patient's self-confidence and self-assurance in the use of telehealth technology. Embracing the importance of telehealth positions the CNS to promote an increase in patients' self-awareness, empowers them to manage their chronic conditions, and engages them in their health promotion, thus positively affecting patient/family-centered care.[28,36,37,39] CNS interventions to mitigate barriers to digital use and resources include creating and implementing patient education and training opportunities to teach content related to a specific digital delivery. For example, the development of basic instructions and fact sheets related to video conferencing would provide information to the patient and family upfront, to ensure that access is available before the first encounter. If the use of a video-type telehealth strategy is impossible or not available, the CNS identifies other methods to provide services, such as phone conferencing or the need for a face-to-face encounter.[34]

Identifying Resources for Telehealth

The CNS has the responsibility to be aware of resources that can assist patients with reduced cost access to care, if telehealth barriers are identified. The National Digital Inclusion Alliance provides information concerning nationwide broadband plans available to those with limited income and resources.[40] Additionally, the CNS is mindful of local and national government low-cost resources for those in need.

Lastly, the CNS can collaborate with local organizations and community-based organizations to develop training for those patients and families with limited digital service access, skills, and resources. The CNS takes the lead as the facilitator to create and implement community-wide programs to help participants increase their ability to navigate digital devices and telehealth modalities. These programs would provide information resources that can offer low-cost or free digital devices such as laptops or computers.[34]

NURSES AND NURSING PRACTICE SPHERE OF IMPACT

Telehealth competencies ensure that the CNS is well prepared to provide support for the nurse in the care of the patent and family in avenues of telehealth. The CNS assists Registered Nurses and other APRNs in advancing knowledge and applying telehealth in appropriate clinical situations. Evaluation of which patients or clinical situations are appropriate for telehealth is necessary, as some patients require assessment consistent with in-person evaluation, such as new symptoms not consistent with previously diagnosed disease process, or need for a hands-on physical examination.[22] The CNS provides direction for interdisciplinary colleagues on steps to take if telehealth technologies are ineffective for care in certain situations such as language barriers.

CNS as Coach and Educator

The CNS involves frontline nurses in telehealth programs' rollout, while focusing on addressing barriers and improvements related to the program.[41] Negative attitudes towards telehealth have been linked with usability problems.[41] The CNS improves usability for the nurse, provider, and patient/family by preemptively addressing barriers including operability, coordination of care, and adoption of continuously evolving telehealth technologies. The CNS uses skills as a coach and educator to provide appropriate training to nurses, other APRNs and other healthcare providers based on the practice setting, patient population, and previous experience of the learners. Training includes information on obtaining informed consent, privacy, and confidentiality.[42] Training also includes direction on adapting the therapeutic patient relationship in telehealth settings and maintaining effective communication in telehealth encounters. The CNS develops telehealth competencies for onboarding of Registered Nurse generalists. The CNS also plays a role in the peer evaluation process by providing feedback to other healthcare providers on the effectiveness of care delivered via telehealth technologies. CNS training and coaching in telehealth ensures the safe and equitable practice of telehealth for nurses and other healthcare providers.

HEALTHCARE ORGANIZATIONS AND SYSTEMS SPHERE OF IMPACT

The CNS promotes wellness and achieves positive patient and systems outcomes such as reducing hospital length of stay and readmission rates, resulting in cost savings for organizations. As a leader of quality improvement efforts and safety initiatives, the CNS provides and facilitates high quality, cost-effective care for patients.

Organizational Impact

As a clinical expert and consultant, the CNS provides organizational assessment to ensure appropriate support systems, resources, and education are available for telehealth. CNSs are instrumental in overcoming system barriers, such as low health and/or digital literacy. Once patient education programs to develop health and/or digital literacy are developed, CNSs support providers in reaching out to patients by developing tip sheets and instructions to help providers best utilize telehealth.[34] CNSs can also use telehealth to reach out to other facilitates within healthcare systems. During the COVID-19 pandemic, CNSs were instrumental in maintaining safe delivery of care by consulting with long-term care facilities and organizations in rural areas to obtain personal protective equipment and ensure that appropriate safety practices were in place.

CNSs lead staff development related to telehealth equipment, as well as product evaluation. Another important CNS organizational impact is the development and implementation of evidence-based policies, procedures, and protocols to guide telehealth practice.

Regulatory Impact

Collaboration with other healthcare providers and policy makers enhances the CNS's ability to positively influence patient outcomes and promote system change. There is significant variation among states in definition of APRN practice and use of telehealth. Currently, nine states mention telehealth in their Nurse Practice Act and 39 states have Telemedicine Acts, but APRNs are not consistently addressed in those acts.[43] Not all states license CNS practice, yet the CNS may still be able to deliver telehealth care. It is vitally important for the CNS to remain current on relevant laws and statutes regarding advanced practice nursing and telehealth, regardless of prescriptive authority. In most cases, federal law should be followed over state law, unless state laws are more restrictive. Although providers generally need to be licensed in the state that the

patient resides in, some states provide temporary licenses or licenses specific for telehealth.[44] The National Council of State Boards of Nursing (NCSBN) approved the creation of an interstate APRN licensing compact in May 2015, and revised the legislation in August 2020 to become effective when seven states passed the legislation.[45,46] When activated, the APRN Compact will provide greater flexibility to APRNs who provide care to out-of-state patients. CNSs who are not able to function as advanced practice providers still deliver patient education, assess environments to improve access to care, and provide consulting serves to set up telehealth programs. It is important to consult laws governing CNS practice in the practice state to understand any practice limitations.

Current Response to the COVID-19 Pandemic

In response to the COVID-19 pandemic, the Centers for Medicare and Medicaid Services released temporary changes or waivers for healthcare providers.[47] Some of these waivers benefit health care providers by increasing access to telehealth services and reduce barriers to telehealth care for patients who live in a different state than the practice setting.[48] It is unclear how long these waivers will remain in place or if some waivers will eventually be reversed.

It is important for CNSs to continue to advocate for policy changes at local, state, and federal levels post-pandemic. Nouri and colleagues[34] recommend that providers advocate to expand access to broadband services, fund equipment purchases, develop a digital infrastructure, and ensure reimbursement parity for telehealth visits. CNSs working with organizational leadership can develop organizational policies and collaborate with community practitioners to affect these solutions. Given telehealth regulatory challenges, individual CNSs can partner with NACNS to influence current legislation to provide flexibility in administering telehealth services and for all CNSs to practice to the fullest extent of their academic preparation.

IDENTIFIED GAPS AND RECOMMENDATIONS

It is quite apparent that telehealth is here to stay. The benefits of patient convenience, reduced costs, and the availability of appropriate technology to support telehealth use make this healthcare innovation a key component of high-quality healthcare, despite some challenges. From this analysis, it is clear that CNS competencies in expert clinical practice, staff education, patient/family education, consultation, collaboration, patient advocacy, leadership, healthcare quality, and evidence-based practice are highly congruent with the use of telehealth as an effective patient care approach. The NACNS Board of Directors charged this workgroup to develop a white paper to define telehealth competencies for the CNS, to identify practice gaps, and to make recommendations for future CNS practice related to telehealth.

The primary gap in telehealth integration into CNS preparation and practice is education and preparation specific to telehealth. Telehealth competency needs to be developed utilizing both didactic and simulation modalities, and incorporated into graduate nursing education CNS programs. Telehealth education for the practicing CNS could be offered through existing continuing education opportunities including national organizations, colleges, or healthcare organizations. Microcredentials are another attractive option to demonstrate telehealth competency. Content should include use of equipment and platforms, patient selection, implementation strategies, telehealth training development for nurses and other healthcare providers, telehealth program development, outcome metrics, patient safety and confidentiality, and regulatory requirements. It is imperative to address diversity, equity, and inclusion as these concepts relate to telehealth to ensure that telehealth technology mitigates, rather than contributes to, health inequities.

A second major gap is the lack of published evidence reporting the role and outcomes of the CNS in developing, leading, and evaluating telehealth programs. In addition, the dissemination gap also includes the effects of telehealth on outcomes specific to patients and families, nurses and nursing practice, and healthcare systems.

CNS competencies need to be timely and relevant as clinical practice evolves, so it is vital to re-evaluate NACNS competencies regularly. Many of the existing NACNS competencies are relevant to telehealth.[30] However, we recommend adding specific telehealth competencies to the NACNS Competencies for CNS practice at the next competency revision opportunity. In conclusion, telehealth can revolutionize healthcare delivery and improve patient outcomes; the CNS as an advanced practice nursing leader has an exceptional opportunity and appropriate skills to lead this change.

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