

NONPF Supports Telehealth in Nurse Practitioner Education 2018

Introduction

New strategies are needed to effectively address the national healthcare provider shortage, complexity of disease, aging of our population, and limited access to care. One potentially unifying solution to current challenges in healthcare that also actualizes the Institute of Medicine (IOM) nursing goals related to innovative solutions to care using technology is telehealth. Telehealth refers to use of technology to provide healthcare services at a distance including direct patient care, remote monitoring, and education. As leaders in healthcare, nurse practitioners (NPs) should possess the knowledge and skills required to advocate for and utilize such technologies in practice.

The National Organization of Nurse Practitioner Faculties (NONPF) supports incorporating telehealth as part of NP education. NONPF believes that telehealth is a consistent form of healthcare and that faculty should assure relevant content is incorporated into curriculum and consider how these technologies could be used to conduct site visits and provide support to preceptors/clinical settings. The purpose of this paper is to provide faculty with an overview of telehealth modalities, discuss strategies to incorporate telehealth into NP curriculum, and provide NONPF's recommendations.

Background

Telehealth includes live, as well as 'store and forward' videoconferencing technologies using computers, cameras, and medical devices (peripherals) to connect patients, providers, and faculty for evaluation, management, and education. As such, it is imperative for NP education to begin incorporating content regarding the various telehealth modalities as listed below.

Telehealth Technology

There are two basic types of technology used in telehealth:

- Synchronous: Occurs when the provider and the patient are interacting with each other in a live real-time manner (i.e., videoconferencing).
- Asynchronous: Occurs when information on the patient is collected, then stored until the provider has time to review it (i.e., store and forward).

Service Delivery Systems

There are four general service delivery systems used in telehealth: videoconferencing, store and forward, remote monitoring, and mHealth (Rutledge, Kott, Schweickert, Poster, Fowler, & Haney, 2017).

- Videoconferencing technology is used in telehealth to connect two or more people in a live conversation for purposes related to healthcare delivery or education using cameras,

TVs, microphone, software, and computer networks, which transmit both audio and video data in real time.

- Store and forward technology is used to collect patient data and then transmit it to the intended destination. Common store and forward data includes: radiology and medical imaging, retinal photos, patient physiologic data, electrocardiograms, patient education and symptom survey data, dermatology/wound images, and pathology images. Systems collect data at a source and forward it for review, eliminating the need for the provider to meet with the patient to obtain data.
- mHealth systems use both live and store and forward technologies via mobile wireless electronic devices, such as mobile phones or wearable health devices. This format advances health, healthcare, health information, and education by allowing for access at any given time.
- Remote monitoring is a form of technology using sensors and devices that measure physiologic data. Remote monitoring systems work by collecting data at one site and then transferring that data to a device, a centralized monitoring program, or a healthcare provider for evaluation. Remote monitoring systems use medical peripherals (e.g., scales, pulse oximetry, stethoscopes, otoscopes, ophthalmoscopes connected to technology) to record and transmit diagnostic information such as weight, oxygen saturation, and lung and heart sounds.

Building Blocks to Curriculum

The NP Core Competency document (NONPF, 2017) includes telehealth as an example of curriculum content to support the Technology and Information Literacy Competency. As telehealth becomes a standard modality in healthcare, content regarding the modality must become an integral part of NP education. Exposure to telehealth may be offered through didactic programs, simulation, and practicum experiences (Ali, Carlton, & Ali, 2015; Edirippulige & Armfield, 2016; Haney, Kott, & Fowler, 2015; Rutledge, Kott, Schweickert, Poston, Fowler, & Haney, 2017; VanHouwelingen, Moerman, Ettema, Kort, & Cate, 2015).

Telehealth Competencies

NP curricula should provide content that prepares students to meet a recommended set of competencies. These competencies are based on the knowledge and skills required to effectively deliver healthcare utilizing telehealth technologies. NP programs should integrate content that prepares students to meet the competencies through didactic programs, simulations/standardized patient programs, hands on experiences, and clinical encounters (Rutledge, Kott, Schweickert, Poston, Fowler, & Haney, 2017). NONPF supports the demonstration of telehealth-related competencies by NP students as they relate to the NP Core Competencies (2017). The competencies are consistent with the competencies required for face-to-face visits. The competencies listed below are not required nor comprehensive; yet provide a suggested list of competencies to be used in NP curricula:

- Telehealth etiquette and professionalism while videoconferencing
- Skills in using peripherals, such as otoscope, stethoscope and ophthalmoscope.
- An understanding of when telehealth should and should not be used
- An understanding of privacy/protected health information (PHI) regulations
- Proficiency in the use of synchronous and asynchronous telehealth technology
- Knowledge of appropriate documentation and billing of telehealth technology
- An ability to collaborate interprofessionally using telehealth technologies
- Proficiency in taking a history, performing an appropriate physical exam, and generate differential diagnoses using telehealth.

Evaluation of Students in Clinical/Practicum Sites Using Telehealth

With evidence suggesting that telehealth results in the provision of quality care, NP educators might embrace telehealth as a tool for assessing students clinically at a distance. With the emergence of many online programs, it is critical that students are evaluated by faculty during clinical encounters. Telehealth allows students to be observed with patients and provides for more opportunities than what may occur with a single site visit. Furthermore, telehealth visits minimize the expense of traveling to distance areas and provides the student with opportunities to use the technology during a healthcare visit.

A Health Insurance Portability and Accountability Act (HIPAA) compliant telehealth platform allows faculty to observe the student during a clinical encounter with a patient. Once the student has received permission from the patient and the faculty member has connected from a secure location, the telehealth platform can be used to observe and evaluate the student during the patient visit. By using the telehealth equipment, the faculty may be able to observe the tympanic membrane, participate in the ophthalmic exam, or listen to the heart and lungs as the student assesses the patient. Feedback can readily occur, and successful assessment can be validated. The telehealth platform may be used to securely discuss the student's performance with the preceptor, as well as to provide the preceptor with needed support and resources.

Incorporation of Telehealth into NP Curriculum

As telehealth moves into the mainstream of healthcare delivery, it becomes reasonable that NP students should receive clinical or practicum credit for providing care using telehealth. As long as telehealth is being used to provide patient care from a clinical site, the hours should be no different than those accrued through an in-person encounter. However, there must be a mix of in-person and telehealth encounters. Telehealth visits must be precepted visits and should allow for participation and delivery of care by the student, rather than observational visits.

NONPF Position

Telehealth is transforming healthcare. It enables access to care for those who need healthcare including specialty care, or may have limited resources. It improves outcomes through innovative models of care using technology to improve frequency and quality of communications and patient engagement. The use of telehealth reduces direct and indirect healthcare costs by improving the treatment and management of chronic diseases, reducing hospital readmission

rates, and improving provider efficiency. Additionally, it provides a solution to patients whose barriers to accessing healthcare is related to travel or finances (McLean, Sheikh, Cresswell, Nurmatov, Mukherjee, Hemmi, et al., 2013).

NONPF believes that NPs who are prepared to deliver care through telehealth can make strong contributions to nursing and healthcare as they emerge from programs as future nursing leaders. It is essential that NPs are empowered with telehealth knowledge and hands-on skills so that they can be a creative force for innovations in telehealth within practice and healthcare systems. NP programs have the opportunity to be at the forefront of healthcare as they develop telehealth education programs and prepare to respond to the challenges ahead by promoting innovation through telehealth education.

NONPF believes that direct clinical site visits should be completed. Direct clinical visits can be accomplished in a direct face-to-face manner or through the direct use of telehealth. As such, NONPF supports the use of telehealth to provide oversight of students within clinical sights and sees it as a means for making remote clinical site visits to those utilizing telehealth technologies. Through proper use of telehealth, faculty should be able to conduct the same assessment of students with patients as they are able to utilize in face-to-face visits.

References

- Ali N.S., Carlton K.H., & Ali O.S. (2015). Telehealth education in nursing curriculum. *Nurse Educator*, 40(5), 266-269.
- Edirippulige, S. & Armfield, N.R. (2016). Education and training to support the use of clinical telehealth: A review of the literature. *Journal of Telemedicine and Telecare*, 0(0), 1-10.
- Haney, T., Kott, K., & Fowler, C. (2015). Telehealth etiquette in home healthcare: The key to a successful visit. *Home Healthcare Now*, 33(5), 254-259.
- Institute of Medicine (IOM). (2012). The role of telehealth in an evolving health care environment: Workshop summary. Available from <http://www.nap.edu/read/13466/chapter/1#ii>.
- McLean, S., Sheikh, A., Cresswell, K., Nurmatov, U., Mukherjee, M., Hemmi, A., & Pagiliari, C. (2013) The Impact of Telehealthcare on the Quality and Safety of Care: A Systematic Overview. *PLoS ONE* 8(8): e71238. doi:10.1371/journal.pone.0071238
- National Organization of Nurse Practitioner Faculties (2017). *Nurse Practitioner Core Competencies Content*. Retrieved from http://c.ymcdn.com/sites/www.nonpf.org/resource/resmgr/competencies/2017_NPCoreComps_w ith_Curric.pdf?hhSearchTerms=%22core+and+competencies%22 .
- Rutledge, C.M., Kott, K., Schweickert, P., Poston, R., Fowler, C., Haney, T. (2017). Telehealth and eHealth in Nurse Practitioner Training: Current Perspectives. *Advances in Medical Educations and Practice*, (8), 399-409.
- VanHouwelingen, C.T.M., Moerman, A.H., Ettema, R.G.A., Kort, H.S.M., & Cate, O. (2015). Competencies required for nursing telehealth activities: A Delphi-study. *Nurse Education Today*, 39, 50-62.

Authors

Lead:

Carolyn Rutledge, PhD, FNP-BC
Old Dominion University

Other Contributors:

Courtney Pitts, DNP, MPH, FNP-BC
Vanderbilt University

Rebecca Poston, PhD, RN, CPNP
Old Dominion University

Patty Schweickert, DNP, FNP-C
Old Dominion University/University of Virginia Health System