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Telehealth Nursing

A POSITION STATEMENT

TELEHELATH NURSING SPECIAL INTEREST GROUP, ATA

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DISCLAIMER

This document is intended to provide a framework for thinking about approaches to telehealth nursing. It does not define any "standard of care". It is not intended it to do so and we condemn any attempt to try to use it as something it is not.

In interpreting what we offer here we stress that no document such as this can possibly anticipate every variation in human biology in health and disease. No document of this kind can replace clinical judgment as the axis on which care must turn, nor substitute for the clinician's experience in attending the sick. On many clinical questions, consensus cannot be reached because data are incomplete and imperfect, because prudent and able professionals disagree, and because sickness itself is inherently a knotty, intricate problem.

We believe the manuscript reflects literature current as of the time it was authored. Where that literature was inconsistent, as it often is, we made judgments about what sources to rely on. In exercising such judgments, we have tried to remain consistent with the pursuit of truth that motivates the best of the investigators whose studies we have considered. We acknowledge that reasonable minds can disagree about these and many other decisions relevant to our effort here.

Further, literature current at the time of authorship is also necessarily dated. In substantially all instances, the research it describes was done in the past, over a period of time. Writing, editing, and publishing are time-consuming processes, so by the time research is published it may well be out-of-date. By the time organizations such as ours scrutinize, analyze, and synthesize that literature, still more time elapses, during which doctors, nurses, scientists, and researchers may well have made new discoveries calling previous conclusions into question. To remain current and to reduce innate biases that can be present in any manuscript, including this one, we encourage our readers to review literature current to their pursuits at the time they will be making their own judgments, particularly clinical ones.

Telehealth Nursing, a Position Statement

INTRODUCTION

As the telehealth field grows, nurses in telemedicine are facing the question of how technology fits into nursing profession. Is technology enabled nursing care simply a delivery method or are we witnessing the budding of a new nursing specialty? If so, what are the scholarly, regulatory and clinical structural components? And what is the risk of not defining the future direction?

While & Dewsbury (2011) share an elegant visual graphic of Information and Communication Technology (ICT) use trajectory over time in nursing practice.

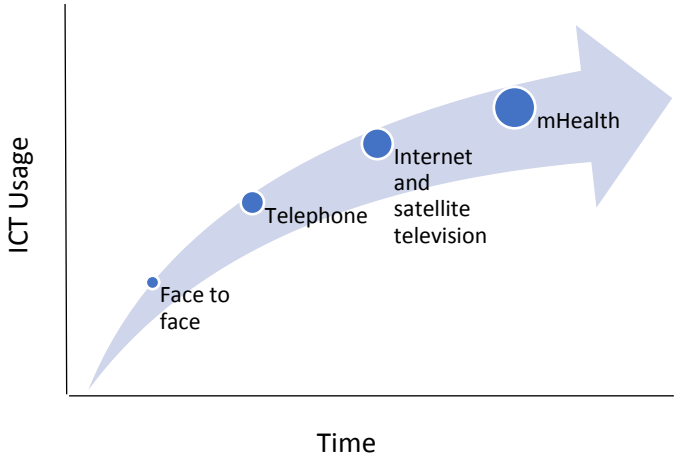


Figure 1. Information and Communication Technology use over time.

The authors identify significant gaps in literature around the details of nursing activity, interventions and roles. They end with a call to action for nurses utilizing ICT to move from being passive data collectors to becoming system designers and lead the shaping of ICT in healthcare.

This paper is a position statement of telehealth nursing by the Telehealth Nursing Special Interest Group. It is not intended to direct care guidelines. The four objectives are as follows:

1. Describe current state of ICT by the nurses and partners in the interactions
2. Explore how telehealth nursing contributes to nursing theory
3. Identify direction of telehealth nursing
4. Address the status of certification

The Telehealth Nursing SIG advances telehealth nursing to practice at the top of their licenses, with the goals of improving patient safety, providing increased access to nursing care, and supporting the health of patients, families, and communities.

OBJECTIVE 1. NURSING AND USE OF TECHNOLOGY

Nursing professionals are increasingly utilizing technology to care for patients in acute care, ambulatory and home settings. From hemodynamic monitoring in intensive care units to electronic medical records to secure video visits, the use of technology has become an integral part of nursing.

The term "telehealth nursing" however, has been emerging to describe nursing professionals who care for patients from a geographical distance via audio or visual modality.

Some telehealth nurses function as "telepresenters," working in the same room with patients who are participating in telehealth consultations with other healthcare providers physically located elsewhere. Others deliver nursing care at a distance relying solely on the audio and video modalities and take place in various settings such as healthcare institutions, patients' homes, or communities. Regardless of the setting, tele-nurses face the immaculate challenge to establish an authentic, caring relationship with a patient when the interaction is limited to a presence on the screen with a voice and in the absence of the traditional hands on human connection.

These challenges raise key questions regarding how technology fits into the nursing profession, if any existing nursing theoretical frameworks are sufficient to guide telehealth nursing and if this is a separate nursing specialty requiring specific training, competency and certification.

OBJECTIVE 2. PATIENT CENTERED THEORETICAL FRAMEWORK

The AAACN developed an Ambulatory Care Nursing Conceptual Framework Diagram identifying three major concepts: patient, environment and the nurse. The authors incorporated technology into the internal care delivery environment. They narrowly defined it as a "care delivery strategy" in the bidirectional interaction between the nurse and the patient. (Abbreviated Fig 2)

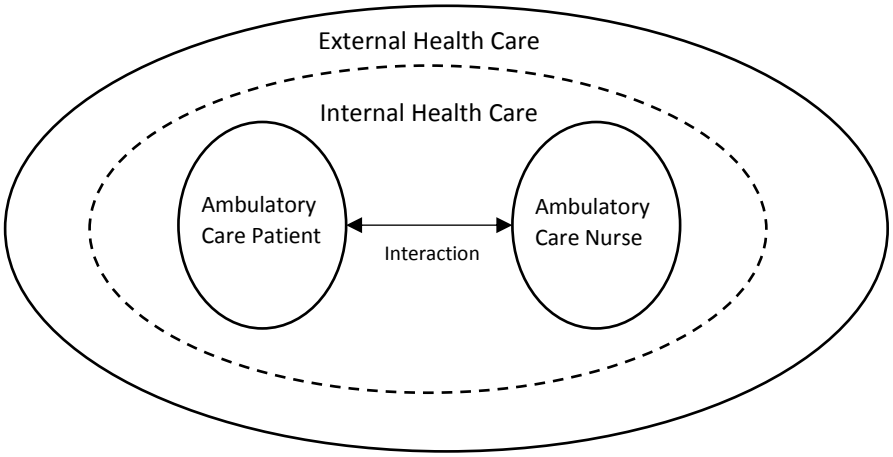


Figure 2. Ambulatory Care Nursing Conceptual Framework Diagram (abbreviated)

Nursing theorists have also analyzed technology in nursing. Watson's Human Caring theory places caring at the center of the nursing profession supported by the processes which must be present to support a caring relationship with a patient: embrace altruistic values, develop and nurture caring relationships and create a healing environment…which respects human dignity.

Locsin (2001) built on this theory by exploring technology use in nurse/patient relationships and offered a new mid-range theory in which technology and caring are harmoniously aligned. His theory postulates technological competency as caring in nursing rather than a modality through which nurses provide care. The author explains that the nurse who has achieved competency in using technology is able to perform necessary tasks such as establishing a secure video connection, remotely assessing the patient and documenting data into an electronic health record while seamlessly connecting and meeting the needs of the patient in an authentic and caring way.

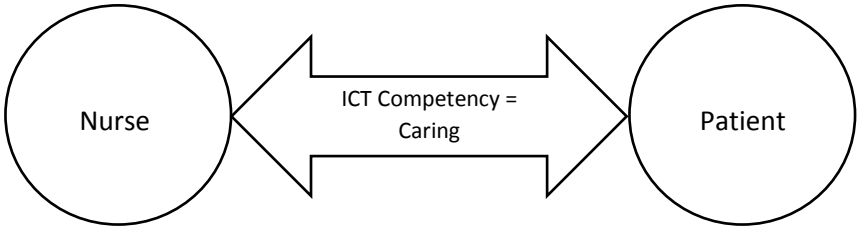


Figure 3. Proposed adoption of Locsin theory diagram

OBJECTIVE 3. <u>TELEHEALTH NURSING FUTURE</u>

Opportunities exist to advance the understanding and practice of telehealth nursing, based on the commitment by all who support and/or incorporate telehealth technologies and principles into the practice of nursing. Some opportunities include:

- **Policy/Regulatory:** engage in policy development to facilitate interstate nursing practice, encourage representations from within and from outside the profession to actively advocate for legislation that promotes nurses' abilities to deliver safe, effective, and affordable telehealth nursing practice

- **Clinical/Environmental:** provide insights for development and improvement of technologies to meet the needs and demands of health care providers and consumers, develop competencies necessary for safe and effective delivery of patient centered telehealth nursing, collaborate with developers of information technology systems that ensure privacy and security of health information, while ensuring ease of use and proper information sharing capabilities, provide a safe, ergonomic environment for telehealth

nursing practitioners， advocate for appropriate levels of technology to ensure effective telehealth nursing practice

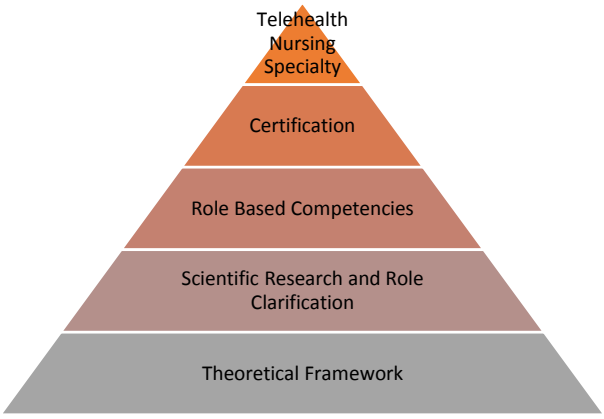
- **Education/Research**: Educate members of the profession about opportunities to implement technology into practice to deliver nursing care to a broader array of clients, removing the barriers of distance and time; recommend the incorporation of telehealth nursing practice principles in the undergraduate, graduate, and doctoral curricula of all nursing programs. Expand the evidence base for the practice of telehealth nursing to Include: nursing theory, the impact of telehealth nursing practice on patient, family, society, health care system, and fiscal implications in research designs

OBJECTIVE 4. SPECIALTY CERTIFICATION

At this time, telehealth nursing is viewed as a delivery method of clinical care and is not recognized as a nursing specialty or subspecialty by the American Association of Critical-Care Nurses (AACN) or American Academy of Ambulatory Care Nursing (AAACN).

Because telehealth nurses provide nursing care to patients who are in ambulatory settings (e.g. home), acute care settings (e.g. hospitals) they must possess the knowledge and competencies to appropriately provide care within their specialty. Nursing specialty bodies are actively incorporating telehealth components in the competency based examinations and practice guidelines but do not yet have a telehealth nursing specific certification program.

Although certification is not available at this time, it is imperative that nurses receive telehealth education and training to develop requisite knowledge, skills and attitudes (KSAs) prior to executing telehealth activities (Van Houwelingen, Moerman, Ettema, Kort, & Ten Cate, 2016.) Nurses who deliver care using telehealth technologies should be well grounded in general nursing knowledge, theory, and practice competencies and have clinical experience in addition to basic technology skills (Nagel and Penner, 2016). The growth of telehealth nursing research will further solidify role base competencies which in turn will lead to telehealth nursing certification and ultimately validation of Telehealth Nursing as a specialty.



CONCLUSION

The American Telemedicine Association and its members in the Telehealth Nursing SIG support the work of nurses in clinical, administrative, educational, and research settings. The success of future of Telehealth nursing as healthcare system engineers is rooted in a clear understanding of current state, the theoretical framework, opportunity to create specific competencies and a clearly outlined vision.

APPENDIX A. RESOURCES

INTERNATIONAL CONSIDERATIONS:

This paper focuses on telehealth nursing in the United States. The role of telehealth competent nurses in delivering healthcare throughout the world continues to increase in importance, however (Murphy et al, 2017). Nurses using remote presence to deliver care are often the most accessible health care providers for large numbers of people.

Prominent organizations with an international focus that support the advancement of telenursing include:

- The International Society for Telemedicine and eHealth
  https://www.isfteh.org
- The International Council of Nurses--Telenursing Network
  www.icn.ch

APPENDIX B. DEFINITIONS

Retrieved on June 18, 2018 from http://thesource.americantelemed.org/resources/telemedicine-glossary

Telehealth and Telemedicine: Telemedicine is the use of medical information exchanged from one site to another via electronic communications to improve patients' health status. Closely associated with telemedicine is the term "telehealth," which is often used to encompass a broader definition of remote healthcare that does not always involve clinical services. Videoconferencing, transmission of still images, e-health including patient portals, remote monitoring of vital signs, continuing medical education and nursing call centers are all considered part of telemedicine and telehealth. Telemedicine is not a separate medical specialty. Products and services related to telemedicine are often part of a larger investment by health care institutions in either information technology or the delivery of clinical care. Even in the reimbursement fee structure, there is usually no distinction made between services provided on site and those provided through telemedicine and often no separate coding required for billing of remote services. Telemedicine encompasses different types of programs and services provided for the patient. Each component involves different providers and consumers.

Telematics: The use of information processing based on a computer in telecommunications and the use of telecommunications to permit computers to transfer programs and data to one another.

Telementoring: The use of audio, video, and other telecommunications and electronic information processing technologies to provide individual guidance or direction.

Telemetry: Remote acquisition, recording and transmission of patient data via a telecommunications system to a healthcare provider for analysis and decision making.

Telemonitoring: The process of using audio, video, and other telecommunications and electronic information processing technologies to monitor the health status of a patient from a distance.

Telepresence: (a) The use of a set of technologies that allows individuals to feel as if they were present, to give the appearance of being present, or to have an effect at a place other than their true location. Telepresence generally means the use of means HD quality audio/video. In some cases, the user's position, movements, actions, voice, etc. may be transmitted and duplicated in the remote location to enhance the effect. Information often travels in both directions between the user and the remote location (i.e., feedback of some sort is provided). Telepresence via video generally uses greater technical sophistication and higher audio/video fidelity than traditional videoconferencing. (b)The method of using robotic and other instruments that permit a clinician to perform a procedure at a remote location by manipulating devices and receiving feedback or sensory information that contributes to a sense of being present at the remote site and allows a satisfactory degree of technical achievement. For example, this term could be applied to a surgeon using lasers or dental hand pieces and

receiving pressure similar to that created by touching a patient so that it seems as though s/he is actually present, permitting a satisfactory degree of dexterity.

Telemedicine is the use of medical information exchanged from one site to another via electronic communications to improve patients' health status. Closely associated with telemedicine is the term "telehealth," which is often used to encompass a broader definition of remote healthcare that does not always involve clinical services.

(ATA Glossary http://hub.americantelemed.org/resources/telemedicine-glossary)

Telehealth Nursing

Telehealth nursing practice is defined as the practice of nursing delivered through various telecommunications technologies "...". The nurse engages in the practice of nursing by interacting with a client at a remote site to electronically receive the client's health status, initiate and transmit therapeutic interventions and regimens, and monitor and record the client's response and nursing care outcomes. The value of telehealth to the client is increased access to skilled, empathetic and effective nursing care delivered through telecommunications technology"...". (NCSBN, 2014)

APPENDIX C. HISTORY

The Lancet published the first article on telemedicine in 1879. The authors recommended leveraging the new technology of the day, the telephone, as a mechanism for connecting patients with providers. The first known program utilizing the telephone was the transmission of EKG information in 1906. Additionally, the conceptualization of using bidirectional videoconferencing was first noted on the cover of Radio News in 1924, showing a provider remotely examining their pediatric patient through a screen (Fathi, Modin & Scott, OJIN 2017). Finally, the 1960's, call centers started to be established staffed by registered nurses who would triage over the phone with patients and other medical professionals (AACN, retrieved May 15, 2018).

As technology advanced and the healthcare landscape changed so did telehealth and nursing. In 1967, Dr Kenneth Bird working at Massachusetts General in Boston setup "closed circuit television" capability between MGH and Logan Airport as a mechanism to examine ill passengers (http://www.mghtelehealth.org/about-us, retrieved May 17, 2018). This medical station was staffed by "Nurse Clinicians" (Telemedicine: A Guide to Assessing Telecommunications for Healthcare, 1996) facilitating the exam for the provider establishing, forty-three years later, the first documented of use of two-way video as a mechanism for connecting the patient with a provider.

During the sixties and into the seventies, NASA partnered with the U.S Indian Service and the Lockheed Company in supporting STARPAHC (Space Technology Applied to Rural Papago Advanced Health Care; retrieved May 17th, 2018 https://www.nasa.gov/content/a-brief-history-of-nasa-s-contributions-to-telemedicine/). This program was comprised of a medical mobile unit leveraged to provide medical support to the Papago Native American tribe located in a remote region of Southern Arizona. Concurrently other programs in the nation were being developed with nursing providing support such as the Telepsychiatry program in Arkansas.

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