

Scope of Practice for Professional Telehealth Nursing

The Scope of Practice statement describes who, what, where, when, why, and how of nursing practice. Each of these questions must be answered if we are to provide a complete picture of the dynamic and complex practice of nursing, its membership, and evolving boundaries (ANA, 2015a).

The Scope includes a definition of professional telehealth nursing services, an identification of the defining characteristics, a specification of the conceptual framework, a description of the practice environment, a discussion of the science and art of telehealth nursing service, an identification of the multiple telehealth roles in health care settings, and a discussion of the professional trends and issues.

I. Definition of Professional Telehealth Nursing

Professional telehealth nursing is a complex, multifaceted specialty that encompasses independent and collaborative practice during encounters that use telehealth technology in a virtual environment. The comprehensive practice of telehealth nursing is one built upon a broad knowledge base of nursing and health sciences, and applies clinical expertise rooted in the nursing process. RNs use evidence-based information across a variety of health care settings to achieve and ensure patient safety and quality of care while improving patient outcomes. Telehealth RNs promote optimal wellness, participate in the management of acute illness, assist the patient to manage effects of chronic disease and disability, provide care coordination during care transitions, and provide support in end-of-life care (AAACN, 2011).

RNs play a critical role in the delivery of telehealth services. The development of the art and science of telehealth nursing practice has improved and expanded coordination of health services, reduced patient risk, and contributed significantly to care management models (Paschke et al., 2017). The telehealth RN is accountable for providing nursing care in accordance with relevant federal requirements, state laws and nurse practice acts, regulatory standards, standards of professional ambulatory care nursing practice, other relevant professional standards, and organizational policies (AAACN, 2011; ANA, 2015a).

Telehealth is an umbrella term used to describe a wide range of services delivered in nontraditional modalities, across distances, by a variety of health-related disciplines. A list of interchangeable definitions is found in

the Appendix. For purposes of this document, the definitions compiled vary. In areas where two definitions are listed, they are complementary to each other and are meant to provide the reader with a comprehensive overview of terminology in the ever-changing telehealth environment.

Defining Characteristics

A telehealth encounter currently has a variety of clinical applications such as episodic primary care, urgent care, inpatient care, chronic disease management, wellness coaching, medication management, and behavioral health. Characteristics of the telehealth encounter will vary on the setting and patient need. Telehealth encounters may:

- Involve real-time visits or remote patient monitoring that can be synchronous (real time) or asynchronous (time lag).
- Utilize a variety of technology platforms which include but are not limited to use of a telephone, mobile smart devices, kiosks, and/or web-based and digital platforms.
- Involve one or more health care providers and may consist of provider-to-patient or provider-to-provider encounters.
- Be a single encounter or in a series of encounters based on the reason for telehealth encounter and patient needs.
- Involve one or a group of patients.

The following knowledge, skills, and attitudes are recommended characteristics for a RN utilizing telehealth interventions across multiple practice settings. The telehealth RN will:

1. Use knowledge and skills based on principles of the biological, physical, behavioral, and social sciences.
2. Use the nursing process when interacting with a patient during a telehealth encounter.
3. Employ critical thinking and synthesis of objective and subjective data obtained during the assessment to identify priorities and care needs.
4. Recognize signs and symptoms of an emergency and readily identify how to best support patients/families in the management of the emergency.
5. Employ clinical judgment and available evidence to expedite a nursing diagnosis and disposition. Assume accountability for coordination of care, includ-

ing the use and delegation of telehealth activities to licensed practical nurses (LPNs) and unlicensed assistive personnel (UAP).

6. Deliver holistic patient-centered care, with the promotion of optimal health outcomes throughout the lifespan and across the health-illness continuum.
7. Demonstrate an appreciation of the environmental context that encompasses culture, ethics, law, politics, economics, and access to health care resources when interacting with the patient.
8. Act as an advocate to advise, assist, and support patients in the optimal management of their health care, respecting their individual needs, health goals, and treatment preferences.
9. Focus on patient safety and quality when applying appropriate nursing interventions.
10. Facilitate continuity of care using the nursing process, interprofessional collaboration, and coordination of appropriate health care services and community resources across the care continuum.
11. Demonstrate leadership knowledge and skills to support the clinical and administrative operations of the telehealth interventions across practice settings.
12. Design, administer, practice, and evaluate telehealth nursing services in accordance with relevant federal requirements, state laws, nurse practice acts, regulatory and accreditation standards, and institutional policies and procedures.
13. Apply the provisions of the ANA *Code of Ethics for Nurses* (ANA, 2015b) to their own professional practice.
14. Pursue lifelong learning and maintain competencies for telehealth nursing.
15. Participate in, contribute to, and/or apply research and evidence-based literature to improve the practice of telehealth nursing.

Objectives of Telehealth Nursing

The major objectives of telehealth nursing align with other types of nursing to:

- Protect and promote health.
- Minimize suffering.
- Maximize health literacy and education.
- Prevent illness and injury.
- Apply nursing interventions to human responses in health, illness, disease, disability, and end-of-life circumstances.
- Actively advocate for optimal coordinated health care of individuals, families, communities, and populations aimed at improving the whole person's well-being.

Interactions between patients and telehealth RNs to achieve patient goals occur in the context of caring, compassion, and sensitivity to the patient's cultural, ethnic, and age-related needs. The RN utilizes telehealth

tools and the nursing process to deliver care in a variety of nursing roles and practice settings across distances.

II. Conceptual Framework

The Ambulatory Care Nursing Conceptual Framework can be used to describe the role of the RN working in a telehealth environment. The conceptual framework for ambulatory care nursing identifies three major concepts and the links between and among them: patient, nurse, and environment.

Patient

Inherent within the concept of patient is that each individual is unique; functions holistically as a biological, psychosocial, spiritual being; and is the center of nurse-patient interactions. In the health care setting, the nurse may not only interact with the patient but may also include interactions with family members, caregivers, support systems, groups, and populations that may be actively involved in the patient's care. Patient health states are categorized as wellness or health, acute illness, chronic disease, disability, and end-of-life care.

Contact or interaction can be initiated by the patient or nurse and the frequency and method of interaction is dependent on the patient's status, disease, and disability. Patients are always the central focus and maintain control of the encounter and treatment with the nurse in a consultative role.

Nurse

Telehealth nursing is an integral component of professional ambulatory care nursing practice that focuses on individuals, families, groups, communities, and populations in primary, specialty care, non-acute community outpatient settings, and in virtual environments. The scope of professional nursing is dynamic, responding to changing societal, organizational, and technological events as well as to the expanding knowledge base of nursing's theoretical and scientific domains (ANA, 2015a).

The telehealth RN component originally evolved when professional nurses were available to patients by telephone to ensure increased access to health care. The nurses triaged the patient to appropriate levels of care. Telehealth nursing has now expanded to include the delivery of more sophisticated nursing care, using various kinds of telehealth technology across distances in multiple types of virtual environments.

Professional RNs have three major role dimensions: professional, clinical, and organizational/systems. While defined separately, these role dimensions are not necessarily mutually exclusive and frequently overlap. The overlap of these role dimensions brings challenges and professional growth, adding dynamism, learning, and diversity in professional nursing practice.

Professional nursing role. The professional RN practicing in a telehealth role functions according to professional, ethical, governmental/regulatory, and organi-

zational standards. As a practice expectation, the professional RN exhibits leadership skills within the health care organization, in the greater community, and across the nursing profession.

Professional practice requires the use of evidence-based scientific knowledge, measurement and evaluation of outcomes, and personal lifelong expansion of nursing knowledge and skills. The professional RN using telehealth technologies contributes to the knowledge and skills of other staff, health care providers, and is actively committed to continuous improvement of health care practices and outcomes.

Clinical nursing role. Professional RNs using telehealth technology regardless of their specialty or setting, practice using the nursing process and evidence-based nursing knowledge to guide interactions. Nurses in all care settings including telehealth require a broad array of competencies:

1. Use of evidence-based resources, protocols, and decision support tools.
2. Competent nursing process skills.
3. Ability to manage acute responsive episodes of care as well as proactive, recurrent scheduled encounters for health promotion and prevention.
4. Ability to critically analyze, integrate, and synthesize subjective and objective data related to patient concerns and conditions into the context of the patient's health situation and living environment.
5. Identifying and prioritizing pertinent problems and goals.
6. Creating and implementing nursing care interventions.
7. Evaluating the effectiveness of care provided.
8. Use technologies required to complete the telehealth encounter.

Additionally, the clinical role encompasses patient advocacy, referring patients to optimal health services within the organization and across the care continuum, health promotion and disease prevention education, and mediating secondary complications. In some cases, the nurse's role is to help the patient understand the trajectory of disease and to help him/her to plan for, adapt to, and manage his/her needs as health status changes.

This clinical role may include performing appropriate independent nursing interventions, consulting and collaborating with professional colleagues for their unique expertise for interdependent care, and functioning as part of an interprofessional team to implement a shared plan to achieve optimal patient outcomes. Professional telehealth RNs maintain accurate and timely documentation of care, and keep other members of the care team informed of changes in patient condition and/or the plan of care.

Organizational and/or systems role. Professional RNs functioning in the systems role administer and coordinate resources, and direct clinical workflow and ac-

tivity within their health care environments. The organizational role also includes collaboration with other health care professionals, resources, and agencies across the care continuum.

This role has multiple dimensions: leadership, staffing, workload, and competency concerns; workplace regulatory compliance and risk management; fiscal management; legal and regulatory issues; organizational cultural competence; and application of health informatics applications. It also includes diagnostic and treatment technologies, systems, research, and health advocacy within the organization and across the care continuum.

While some functions of all three roles are part of every RN's practice, emphasis on one of the roles usually exists depending on the specific functional position of the nurse within the practice setting. For example, whether functioning in face-to-face or virtual encounters, nurses will most likely focus on the clinical role requirements of their job description. However, organizational and professional role requirements may be expected concurrently depending on the organization's structure and the unique situation.

Environment

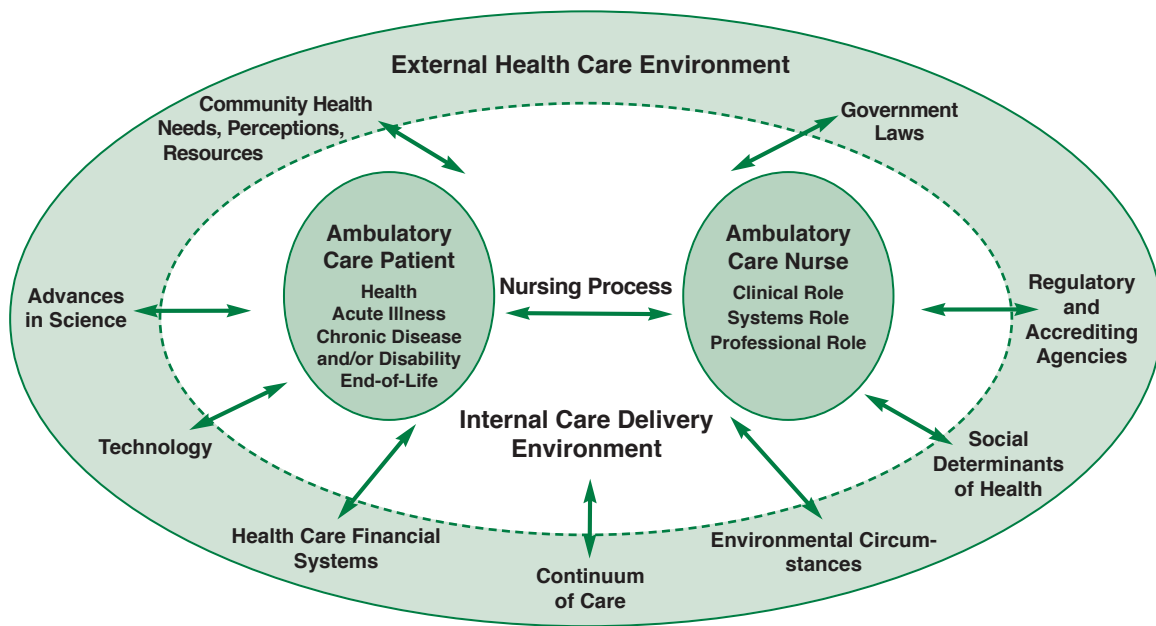
Environment as a concept continues to define ambulatory care and telehealth nursing practice. Recent changes in the health care landscape confirm environment is increasingly important to other nursing specialties. In addition to unique nurse-patient relationships and interactions, ambulatory care and telehealth nurses address organizational, social, economic, legal, and political factors within the health care system, the external health care environment, and in virtual environments. A virtual environment is defined as an environment other than the one in which the participants are physically present (Nagel, 2014; Wilson, 1997). Conceptually, environment has two major dimensions: internal and external.

Internal care delivery environment. The professional nursing practice delivery environment is dynamic and diverse. Within the internal environment there is interaction between patient and nurse. This interaction occurs either as a face-to-face or as a virtual encounter. Ambulatory care nursing and telehealth nursing may include a broad scope of multifaceted practice settings where patients seek health care treatment and where the professional RN functions. The use of virtual encounters in a telehealth setting provides the opportunity to provide care across distances.

External health care environment. The external environment refers to the physical location of each health care practice and includes other health care settings. Additionally, the external environment includes social determinants of health and health resource agencies across the greater environment that affect professional nursing practice.

The external geographical locale, available health care resources, and social determinants of health often influence that setting's mission, patient population, and practices. These external factors include other health

Figure 1.
Ambulatory Care Nursing Conceptual Framework Diagram



Source: Copyright © 2018. American Academy of Ambulatory Care Nursing

care settings, but are not necessarily limited to:

- Government laws (local, state, and/or federal).
- Regulatory, accrediting agencies, and professional practice regulations (Centers for Medicare & Medicaid Services, The Joint Commission, professional nursing organizations, etc.).
- Social determinants of health care which include socioeconomic status, education, physical environment, employment, social support network, and access to care (World Health Organization [WHO], 2017).
- Environmental circumstances (safety, transportation, pollution, disasters, epidemics, and/or pandemics, etc.).
- The extent and composition of the continuum of care.
- Health care financial systems (private insurers, Medicare, Medicaid, Veterans Health Administration, etc.).
- Types of technology (telehealth, information management, diagnostic, and treatment).
- Advances in science (scientific and evidence-based knowledge).
- The surrounding community population's specific needs, perceptions, and resources.
- The unique needs of the population served under population health programs (e.g., congestive heart failure, diabetes, mental health diagnoses, etc.).

Telehealth nursing is also present in other health care settings. An example would be post-discharge phone calls that occur from either the ambulatory care clinics or inpatient settings. Telehealth nursing practices in the inpatient settings may include eICU, tele-rounding, specialty nurse consultation by e-visits, and acute care monitoring. See Figure 1 for the conceptual diagram of telehealth nursing.

III. Evolution of Modern Telehealth Nursing Practice

Historically, telehealth was first introduced in the 19th century. However, it was during the 20th century that telehealth nursing emerged and expanded. Now, in the 21st century, telehealth in general and the practice of telehealth nursing has expanded exponentially due to development of innovative technologies, new legislative mandates, changes in health care reimbursement, and shortages of providers and RNs.

Early Origins: 19th Century

Telehealth as we know it today was first practiced by Alexander Graham Bell shortly after he invented the telephone in 1876. He spilled battery acid on himself and asked for help over the phone line (Darkins & Cary, 2000). In 1879, an article in *The Lancet* discussed using the telephone to reduce unnecessary office visits (Institute of Medicine [IOM], 2012). This was the first time delivery of health care over the telephone was documented in the

literature. The telephone became key to delivering health care in the home, and not just in the provider's office.

20th Century: A Changing Healthcare Landscape

Legislative mandates changed the health care landscape in the 1970s and 1980s. Legislation endorsed Health Maintenance Organizations (HMOs) and established a capitated reimbursement system. Capitation failed to cover all health care expenses and it became clear costs needed to be reduced. The need to contain costs led to utilization of nurses in the role of patient interface with the health care system. These nurses, often called *triage* or *advice* nurses, helped patients determine the appropriate time, place, and manner to access care. Thus, telephone triage nurses became viewed as *gatekeepers*. In a system designed for cost containment, they directed patients to different levels of care, and were regarded by some as barriers to care (Rutenberg & Greenberg, 2012).

In the same general time frame, hospitals identified nurse-staffed call centers as effective public relations tools. The role of nurses in these call centers was to support marketing initiatives, such as health fairs, physician referrals, and provide health education and advice. With time, the role of telephone triage and advice nursing evolved within these hospital-based call centers as well as in HMOs, insurance companies, and other proprietary entities. Additionally, telephone triage and other forms of telehealth nursing were being practiced in most, if not all, ambulatory care settings, but its presence and significance were largely unrecognized (Rutenberg & Greenberg, 2012).

During the 1990s, it was recognized that telephone triage RNs provided new and valuable services, improved access to health care, and redirected patients to appropriate levels of care, generally facilitating positive clinical outcomes with more efficient use of resources (Rutenberg & Greenberg, 2012). Additionally, these RNs provided patient education, and increased physician, patient, and nurse satisfaction while providing cost-effective quality care (Omery, 2003).

As the practice of telephone triage became more robust, many nurses were practicing under the guidance and authority of largely physician-developed decision support tools and served to support the medical model of care. However, AAACN members recognized a need for a stronger professional identity and the organization established standards specific to telehealth nursing. AAACN also endorsed a national certification for Telephone Nursing Practice by the National Certification Corporation (NCC) from 2001-2007.

In 2007, it was decided that telehealth nursing was not a specialty or a sub-specialty, but rather an *integral component* of ambulatory care nursing (AAACN, 2007). It was recognized that a wide base of knowledge of ambulatory care nursing was essential to the successful practice of telehealth nursing. Further, knowledge of the practice of telehealth nursing and utilization of telecommunications technology should be part of the basic skill

set for all ambulatory care nurses (C. Rutenberg, personal communication, August 14, 2017). Subsequently, AAACN worked with the American Nurses Credentialing Center to incorporate telehealth content into the Ambulatory Care Nursing Certification Exam (Rutenberg & Greenberg, 2012).

21st Century Changes: Technology Explosion

Although the telephone was key to the practice of early and maturing telehealth nursing in the 20th century, innovative changes in technology have continued to move telehealth practice forward. Both the government and private entities have recognized the benefits of changes to improve disparities in health care in remote and rural settings. The invention and growth of the Internet and other technologies have allowed for rapid growth of telehealth. Telehealth promises to bring “untold change to the healthcare industry and radically improve the delivery of care to patients” (Darkins & Cary, 2000, p. 2).

The Affordable Care Act of 2010 funded patient-centered Accountable Care Organizations that created new roles for nursing in care coordination and transition management (Haas, Swan, & Haynes, 2014). These new roles rely heavily on telehealth technology. The increased incidence of chronic illness, rising health care costs, and increased emphasis on the delivery of quality care have influenced the development of services that incorporate telehealth nursing as a care delivery strategy that provides disease management, care management, case management, and clinical prevention services (AAACN, 2013).

Modern consumers have come to expect their care will be delivered conveniently and quickly via electronic means. Health care systems, in order to compete for dwindling resources, including providers and RNs, will continue to increase the use of telehealth technologies to deliver health care.

Nurses are involved in three main modalities of telehealth:

1. Real-time telehealth, also known as synchronous or live telehealth, uses interactive video technology in care, generally between a health care provider and a patient.
2. Asynchronous telehealth incorporates transmission of prerecorded information, such as photos or X-rays, to specialists for interpretation.
3. Remote patient monitoring utilizes electronic monitoring devices from home, community, or on patient's person to capture physiologic data and patient's symptoms. Nurses review the information and coordinate care as necessary (Darkins & Cary, 2014). Digital technologies will continue to grow and dominant future health care delivery.

Today, telehealth continues to reshape nursing practice across the health care continuum. Because of the need to decrease the spiraling costs of health care, increase access to care in community sites, support the

growing numbers of aging and chronically ill patients, and to bring care to both urban and rural areas, telehealth nursing continues to expand. Telehealth nursing services are patient friendly, convenient, and facilitate ease of use for patients. Telehealth encounters decrease the distance and amount of travel required to access health care, decrease readmission to inpatient settings by enabling frequent monitoring of patient's health states, and supply nursing services in areas where shortages exist.

IV. Practice Environment: Virtual

With the increasing use of technology to support access to health care, there is an expanding role for nursing in the utilization and leadership in the use of telehealth technologies. "The importance of telehealth as a major vehicle for delivering timely care over distance has become increasingly relevant as the world's health care needs have become overwhelmed by a significant increase in the global level of chronic disease" (Dinesen et al., 2016, para. 2). The Macy Foundation (2016) report indicates RNs can increase access to care by assisting with management of chronic disease, substance abuse, and mental health patients. The telehealth nurse can improve transitional care as patients move throughout the complex health care system.

Benefits of telehealth are well recognized and include increased access to health care, better health outcomes, and more cost-effective service delivery (Nagel et al., 2016). Telehealth provides the right care at the right time and in the right place. Patients are no longer required to travel long distances to attain optimal outcomes, nor are they limited to receiving needed services at fixed practice sites (Lipstein & Kellermann, 2016). Telehealth offers the opportunity to deliver patient-centered care that is both accessible and convenient, overcoming many of the barriers in traditional health care delivery systems (Dinesen et al., 2016). Telehealth encounters occur in clinic settings, on the telephone, or by electronic messaging, and in other non-face-to-face (virtual) environments that are convenient for the patient. Encounters are generally, although not always, initiated by the individual seeking information and/or care. This practice environment allows for the export of nursing expertise to patients and encompasses specific practice settings, usually defined in terms of the medical specialty, and resources of the institution(s). Understanding and defining organizational, provider, and patient access will determine the most effective operating environment. The RN can also improve consumer engagement, quality scores, and collaboration within the health care team.

Practice Settings

Telehealth care spans primary care (when the patient first seeks care) through acute care, chronic and disability care follow-up, and palliative care in end-of-life situations in a variety of settings such as hospital based, skilled nursing facility, and assisted living. Telehealth RNs care for patients in all phases of preventive care, health

maintenance, diagnosis, treatment, and follow-up, as patients move across the health care continuum.

It is important for all health care providers to maintain a patient-centered approach to care. This care is focused on adapting to the virtual environment where the communication techniques allow for sound clinical assessments and preservation of safe clinical relationships at a distance (Guise & Wiig, 2017). Nursing must utilize sound clinical assessment skills and provide appropriate, safe, and holistic care in clinical practice; this remains imperative with the shift from traditional face-to-face encounters to a virtual environment where information exchange is digitally mediated (Nagel et al., 2016).

For nurses in the virtual environment, hearing the patient's story, extracting relative subjective and objective data, and formulating conclusions about the patient's needs are essential to the effective delivery of nursing care. The nurse must utilize highly effective communication skills to obtain sufficient and clear information for creating a mental image or "getting a picture" of a person.

The dimensions for getting a picture of the patient include:

- Entering in the relationship
- Connecting with the person
- Sharing and reviewing information
- Recognizing patterns and trends
- Recording and reflecting patient information
- Putting pieces together over time
- Transitioning out (Nagel et al., 2016)

Types of Telehealth Care Organizations

Telehealth nursing functions in a variety of health care organizations as part of an organized nursing department under a nurse executive with a voice at the governing body level. Advancements made by the Magnet® nursing status, Pathways to Excellence, and The Joint Commission, require nursing leadership authority over nursing practice. Some health care settings continue to have nurses reporting to non-nursing leadership that may impact the standard of nursing practice and delivery of nursing services.

Within the distinct types of health care settings there may also be internal differences based on size, regional location, network or health system affiliation, and regional differences in health finance administration.

Telehealth occurs in the following organizational settings:

- Care management or care coordination centers
- Ambulatory care settings
- Inpatient settings
- Government health systems, including military settings
- Telehealth service centers
- Urgent care centers or emergency departments

- Long-term care
- Schools
- Behavioral health facilities

The practice environment of nurses working in various telehealth roles is diverse and numerous and is intimately linked and integrated with the American health care system. See Figure 2 for the context of telehealth nursing practice as an integral component of ambulatory care nursing practice.

Treatment Episodes

The patient or health care provider originates an episode of care in the telehealth environment. Direct observation technology may not always be readily available in all cases. Thus, the nurse may have to rely on patient-reported symptoms. RNs use the nursing process during assessment and treatment episodes that are effective and/or patient/family centered and controlled. With telehealth encounters, the RN must offer encouragement and meaningful insight into patient data throughout the patient's progress or patient participation may decline (Dinesen et al., 2016).

Treatment plan. The management of the treatment plan in the telehealth setting is largely the responsibility of the patient/family system. The RN, as consultant and advocate, pursues a more comprehensive understand-

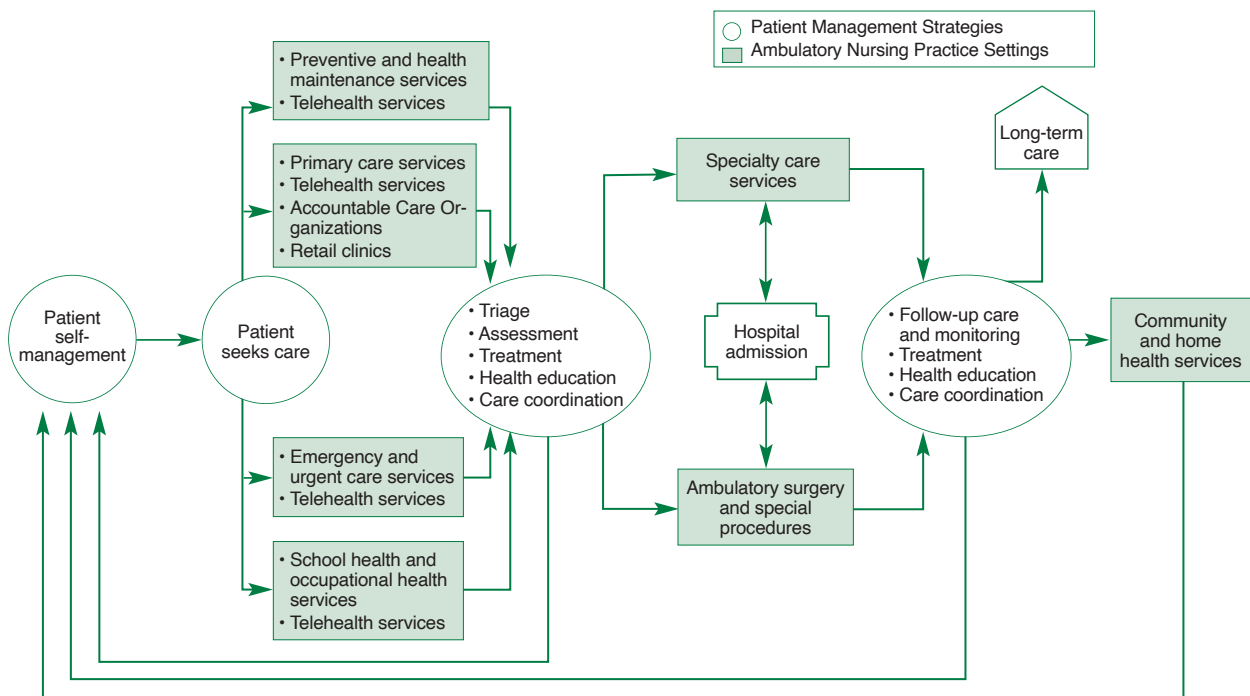
ing of the patient's condition. Effectively questioning for additional subjective and objective data avoids gaps in critical information needed to make clinical judgments about diagnosis and care. Health care organizations continue to acquire more sophisticated information systems. Increasingly, RNs have access to more objective data regarding the patient's health status such as medical history, specialist visits, medications, and test results.

The telehealth environment has not only created change for the nurse but also for the consumer. This modality of care requires consumers to have a greater trust in themselves and their own ability to make lifestyle changes and carry out health-related actions. This trust in themselves was previously placed with their health care professionals. The health care professional has the new task of facilitating these changes for the consumer.

Care interventions. Historically, interventions by telehealth RNs tended to be patient initiated and focused on health care advice. RNs provided instructions on how to manage a condition in the home or how to prepare for diagnostic testing. In recent years, patients with more complex conditions and/or treatment regimens have received care from RNs in both inpatient and outpatient settings. In both settings, telehealth nursing continues to expand and evolve. Care interventions commonly applied by the telehealth nurse include:

- Identifying and clarifying patient needs.

Figure 2.
Context for Ambulatory Care Nursing Practice



Source: Adapted from Hastings, 2013 and AACN/ANA, 1997.

- Conducting health education.
- Promoting patient advocacy and self-efficacy.
- Coordinating nursing and other health services.
- Assisting the patient to navigate the health care system.
- Consulting and collaborating with other health care professionals.
- Facilitating the development of an intraprofessional care plan.
- Evaluating patient outcomes.

Nursing Workload: Variable

Telehealth nursing is as variable as the modalities through which it is delivered. Factors affecting workload include what is being monitored or assessed, the modality being utilized, and the frequency and duration. Available support services and requirements for electronic health record (EHR) documentation may also affect workload. It is important to have quality monitoring and improvement processes in place to assist with responding to changes in circumstances, assessing unexpected performance, and identifying improvements. The primary goal of telehealth is improved clinical outcomes alongside more efficient use of clinician time (Sharma & Clarke, 2014). Workload requirements and population needs can be researched by utilizing data contained in the EHR system; other workload management tools include call management systems.

V. The Science and Art of Telehealth Nursing Practice

Telehealth nursing practice is a learned practice requiring the application of a core body of knowledge from the biological, physical, behavioral, and social sciences. Telehealth nursing utilizes a variety of telecommunication technologies during encounters to assess, triage, provide nursing consultation, and perform follow-up and surveillance of patients' status, interventions, and outcomes (AAACN, 2013). Telehealth nursing is both an art and a science, combining professional knowledge with interpersonal and technical skills.

Science of Telehealth Nursing Practice

The science of telehealth nursing is based on a six-step nursing process: nursing assessment, diagnosis, goal/outcome identification, planning, implementation, and evaluation. These steps are central to the clinical decision-making process and are used in evidence-based practice.

Telehealth nursing focuses on needs of patients in all phases of health, illness, and disease, assisting patients to promote and maintain health and prevent or mediate illness, disease, or disability. The nursing needs of patients are assessed holistically, using available objective data as well as subjective data from the patient and family. In telehealth nursing, gathering data, especially

objective data, requires the use of the art as well as the science of telehealth nursing. While nursing diagnosis and treatment(s) are similarly focused on the patient's goals, implementation and evaluation of progress toward outcomes are patient centered and patient driven and of a collaborative nature.

In addition, the use of decision support tools, if available, involves the use of science, supporting clinical judgment and decision-making process. The tools should be evidence based, using data and outcomes to drive the nursing process. Decision support tools suggest assessment parameters, and guide the nurse in collecting a relevant history and suggesting appropriate dispositions, education, and advice (Rutenberg & Greenberg, 2012).

Art of Telehealth Nursing Practice

The art of nursing practice applies to all telehealth nursing roles. It is based on respect for the dignity of others and compassionate caring, embracing a multitude of dynamic processes that affect human interaction. These dynamic processes are aspects that foster health and healing:

- Listening
- Assisting
- Mentoring
- Coaching
- Empathizing
- Teaching
- Exploring
- Providing presence
- Cultural competence
- Accepting
- Nurturing
- Resolving conflicts

In telehealth nursing, knowing the patient presents additional challenges. It is often a single interaction, and the interaction relies on remote technology to convey the intangible aspects of nursing. Telehealth nursing allows the opportunity to augment a nurse/patient relationship, taking the relationship beyond the clinic and acute care setting (Nagel, 2014).

Telehealth nurses employ practices that in nature are:

- **Restorative:** Practices that modify or mediate the clinical impact of illness, disease, or disability.
- **Supportive:** Practices that modify the impact of clinical/organizational/professional concern or dysfunction.
- **Promotive:** Practices that mobilize healthy patterns of living and quality of life for individuals, families, organizations, communities, and populations (ANA, 2004, p. 10).

Professional Responsibility

The practice of telehealth nurses is affected by the changing needs of society, the expanding knowledge base of nursing's theoretical and scientific domains, and growing health care technology. Nurses need to place themselves at the center of development, acting as a voice for their patients and profession. During an encounter, the RN focuses on patient safety and quality of nursing care by applying appropriate nursing interventions (AACN, 2013) and using critical thinking during the nursing process.

Professional responsibility requires multiple and diverse skills:

- Visionary leadership in practice settings
- Inclusion of the community and the profession
- Management skills in patient care settings and profession
- Sound personal and professional ethical code
- Continual ambulatory nursing knowledge development
- Review and evaluation of nursing practice
- Evaluation of and improvement in the quality of patient and organizational outcomes
- Evaluation of safety
- Assessment of the effectiveness and costs in planning and delivering nursing care
- Maintenance of communication with the patient, family, and/or caregivers

For telehealth nursing, this means addressing the lack of pertinent research and potential for fragmented care. In addition, more research addressing telehealth nursing outcomes is needed, and the telehealth nurse should lead the way.

VI. Types of Telehealth Nursing Roles

The practice of telehealth nursing is the responsibility of the RN. Due to the complexity and potential for ambiguity associated with the provision of care via telehealth, it is essential that nursing care be managed by a licensed professional who is formally educated to exercise clinical judgment and utilize critical thinking. Telehealth nursing represents independent nursing practice in a highly collaborative environment (Rutenberg & Greenberg, 2012). Therefore, nurses undertaking telehealth roles must have the education and experience necessary to support critical thinking and complex decision making.

Nursing care delivery utilizing telehealth technology can be embodied in three distinct categories:

1. **Triage** or management of symptom-based encounters most often occurs over the telephone but may occur via videoconferencing or other types of telehealth technology. Due to the level of sophistication necessary for safe management of symptom-based calls, triage is performed exclusively by RNs. In telehealth triage, in which the nature and urgency of the call are unpredictable, RNs should be able to man-

age a full range of calls, from simple to complex. Novice nurses need specific support for role development and enhanced clinical expertise via structured competency-based programs.

2. **Coordination of Care and Transition Management** involves chronic care management, behavioral modification, and other patient care activities. Elements of the nursing process requiring critical thinking may not be delegated. The processes of care coordination and transition management (Coleman & Boulton, 2003) necessitate professional assessment, patient risk identification and stratification, and identification of individual patient needs and preferences that require:
 - a. Interprofessional collaboration and teamwork.
 - b. Evidence-based care delivery.
 - c. Patient and/or caregiver activation and empowerment.
 - d. Utilization of quality and safety standards.
 - e. Ability to work independently in the domain of nursing to identify and access community resources that meet individual, group, or population needs (AACN, 2016).
3. **Remote Patient Monitoring** nursing roles include both short-term and longer-term acute and chronic care assessment and interventions with both patients and consumers. Nursing roles are focused on supporting adoption of self-care management techniques and increased health promotion and prevention behaviors. Nursing roles have evolved as technology and ability to share physiologic data is enhanced through technological advancements in wearables, sensors, and digital tools that impact both the timeliness and scope of data available to the RN and care team. New technologies are classified as either medical grade or consumer grade; each provide for enhanced patient data exchange which may challenge health care teams identifying appropriate, scalable, and meaningful interactions with patients and consumers. Clinical decision support, artificial intelligence, machine learning, and "big data" practices will provide opportunities to determine meaningful data sets and health care interventions for the future (Rigla, Garcéa-Sáez, Pons, & Hernando, 2017). Nurse-led traditional patient remote monitoring programs are well-accepted methods for supporting patients in managing their chronic care health issues. As technology advances, many new health care tools will support nurses in providing interactive nursing care for patients experiencing shorter-term needs such as post-hospitalizations, procedures, and clinic-based episodes of care. Health care will be provided through patient software applications such as interactive care plans on a smartphone, implantable as well as noninvasive monitoring technologies for specialty-specific acute and chronic needs, and short-term data monitoring to identify trends and patterns of health or disability

fueling predictive health analyses. Finally, nurses' "web-side" competence in use of video technology, utilization of digital data, and mastery of personalization of care will be critical skills to support emerging models of care which rely on technology as a foundation of interaction with patients.

Delegation to non-RNs

All encounters requiring assessment, nursing diagnosis, goal setting, planning, and/or evaluation must be conducted by an RN. Delegation to other staff may be appropriate within this category; however, any encounter that unexpectedly presents a symptom should be transferred to an RN for triage (Rutenberg & Greenberg, 2012).

To assure RNs work to the top of their license and to assure cost effectiveness (AAACN, 2017a, 2017b), some elements of telehealth nursing may be delegated to non-RNs. When elements of telehealth nursing tasks are delegated to LPN/LVNs or UAP, these individuals are functioning under the supervision of the RN or a provider.

VII. Professional Trends and Issues

The practice of telehealth nursing continues to evolve as the landscape of health care has shifted from a focus on acute illness to an emphasis on health and wellness in informed and empowered patients, families, and caregivers. Innovative telehealth practice settings provide solutions to the high incidence of chronic illnesses, shrinking health care resources, limited access to subspecialty providers, and an ever-expanding patient population. Among these challenges is the need to partner with and advocate for patients as they navigate through the complex and fragmented health care system. This shift in focus is accompanied by new initiatives such as care coordination and transition management across the care continuum, health promotion and disease prevention, and emphasis on population health and wellness across the lifespan. Customer satisfaction and measurable outcomes are critical indicators of quality care delivery. A new generation of innovative technology is providing patient-centric solutions.

Telehealth nursing is an important outgrowth of this movement. Instead of a primary focus on delivery of care in the face-to-face setting (in either acute or ambulatory care venues), the emphasis is now on learning new techniques to connect across distances with patients and their families or caregivers in their own environment. While the telephone continues to be a vital tool with which telehealth nursing care is delivered, nurses are utilizing other telehealth applications and technologies. Decision support tools are a foundational component of telehealth technologies. The evolution of machine learning and artificial intelligence is becoming more prevalent in health care and will also impact telehealth technology and nursing care. It is important to recognize that telehealth nursing is nursing provided via the use of telehealth technology rather than defined by the technology itself.

Enhanced Nurse Licensure Compact (eNLC)

In the mid to late 1990s, as telehealth nursing gained more visibility, the question of interstate practice became an issue. In 1997, the National Council of State Boards of Nursing (NCSBN) published *Position Paper on Telehealth Nursing Practice* in which they asserted nursing care delivered over distance using telecommunications technology is indeed the practice of nursing and is thus regulated by state boards of nursing (BONs) (NCSBN, 2014). Later, the NCSBN, along with the Federation of State Medical Boards and the National Association of Boards of Pharmacy, published a collaborative position statement declaring the locus of responsibility for a telehealth nursing encounter is at the location of the patient, family, and/or caregiver (Tri-Regulator Position Statement). Thus, nurses are practicing in the state in which the patient is located, regardless of the location of the nurse (NCSBN, 2014), even if the patient is only in the remote state temporarily (Rutenberg & Greenberg, 2012).

To address this regulatory concern, the Nurse Licensure Compact (NLC) was proposed in 1998. However, progress was stalled as only half the states passed legislation to join the Compact. In 2015, an eNLC was proposed to bring more states to the table. The theme of this revised compact is "Unlocking Access to Nursing Care Across the Nation" (NCSBN, 2017). Within about 2 years of development of the eNLC, the number of states in the Compact grew, with the opportunity for more states to be included.

Until uniform adoption of the eNLC is achieved, those practicing telehealth nursing remotely in non-Compact states will often continue to be at risk by either providing care across state lines, effectively practicing in remote states without a license, or declining to provide care to patients who seek their counsel. Short of each state enacting the eNLC, nurses in non-Compact states often find themselves in the difficult position of problem solving how best to assist callers when Compact state or licensure are in question. Technological solutions such as geo-caching assists organizations with matching licensed nurses by corresponding eNLC states to the patient's physical location. AAACN has supported the adoption of the eNLC to support telehealth nursing practice across state lines providing care regardless of where the patient is located.

Staffing and Role Confusion

Role confusion continues to exist in health care especially as it pertains to telehealth nurses practicing at the top of their license (IOM, 2012). Professional nursing needs to evaluate the scope of practice of the intended telehealth activities to assure appropriateness of staffing. Non-licensed staff may provide support to telehealth activities if RN assessment and judgment are not required. For example, some tele-presenting, telephonic communication, and secure messaging may be supplemented by non-licensed individuals. Telehealth encounters requiring critical thinking, clinical reasoning, and nursing

judgment must be conducted by RNs regardless of the health care setting.

Medication Management

Another challenge in the telehealth setting involves the recommendation of medications. Boards of nursing and pharmacy vary in their positions and opinions regarding whether it is within the scope of practice for the RN to recommend over-the-counter (OTC) or prescription medications and under what circumstances. Some BONs regard recommendation of OTC medications as being within the independent scope of practice of the RN, other states will allow this action only based on a medically approved protocol, and others will not permit RNs to recommend OTCs under any circumstances. Recommendation or renewal of prescription medications is universally regarded as being outside the independent scope of practice of the RN. However, some states will allow RNs to initiate prescription medications or renew existing prescriptions using a medically approved protocol (Rutenberg & Greenberg, 2012).

Interprofessional Relationships

The relationship between the telehealth nurse and other members of the health care team is often misunderstood by members of both the nursing and the medical professions. Telehealth nursing, while collaborative, is independent nursing practice. The misconception that the nurse functions as an agent of the provider, with the provider being responsible for decision making, overlooks the significance of the nurse/patient relationship and fails to recognize the autonomy and responsibility held by the RN. Nurses play a critical role in the evolution of team-based care. Collaboration with other health care providers in the telehealth setting is evolving into a true partnership.

Telehealth Technology

Electronic/virtual visits, patient portals, and mobile device applications have joined structured telephone support and remote biophysical monitoring as tools in the nurse's toolkit. These tools enhance the ability to improve patient, family, and/or caregiver engagement in care, provide real-time health monitoring, lend support for patient self-management, and enhance communication between the patient and health care professionals. A growing body of evidence supports positive outcomes associated with many technologically enhanced interventions that provide health information and advice, support lifestyle modification, encourage medication adherence, enhance chronic condition management, and reduce unnecessary utilization (DeBlois & Millefoglie, 2015; Flodgren, Rachas, Farmer, Inzitari, & Shepperd, 2015; Vinson, McCallum, Thornlow, & Champagne, 2011; While & Dewsbury, 2011). Telehealth, technology is applicable in the following situations:

- Symptom triage and management
- Education and coaching

- Chronic care management
- Care coordination and transition management
- Patient, family, and/or caregiver activation
- Medication and treatment plans under protocols
- Transmission of diagnostic results
- Physiologic monitoring of patients
- Scheduling of appointments and referrals
- Other necessary health care functions

Electronic Health Records: The ability of health systems to support and coordinate patient care through virtual information exchange remains a priority in health care. For telehealth technology to be useful, it must be integrated, accessible, and user-friendly. To improve patient safety, a national incentive program to use electronic health records (EHRs) was offered through the American Recovery and Reinvestment Act of 2009). Implementation of EHRs has changed the way telehealth RNs practice and affected how services are provided in population health, transitions of care, and integrated care across the continuum of care.

Technological Challenges: Challenges remain in that not all telehealth nurses have access to the same type of technology, applications, and tools, nor are they always included in development of information technology applications. Education to support digital literacy in the health care setting is often lacking for nurses (ANA, 2015a). Federal and state regulation and funding is another major influence on the development and diffusion of telehealth technologies supporting innovative models of care.

These challenges impact the ability to streamline communication across the continuum of care and negatively impact efficiency. These inefficiencies can be measured in decreased customer and staff satisfaction, poor patient outcomes, and increased risk. An organization's ability to continually identify gaps in delivery of services and expand quality oversight will ensure improved processes for the telehealth nurse.

Shifts in Workplace: Advancing technologies have enabled the telehealth nurse to work virtually from remote locations. This shift in the defined workplace poses both advantages and challenges for the nurse and organization. Foremost among these challenges, as in all telehealth settings, is protection of patient privacy. Encryption of medical records is necessary, and patient privacy is maintained under government regulation and oversight.

Defining Quality Care and Outcomes

Societal, economic, and regulatory influences have moved health care in the United States toward reimbursement based on quality indicators. Quality of care and performance improvement have increased in visibility and intensity in the provision of telehealth services. The identification and definition of quality outcomes have been elusive in telehealth nursing. In the past, productivity measurements such as call length have been uti-

lized to define and assess quality care. Now qualitative measures are emphasized with focus on structure, process, and outcome. Clinically oriented outcome measures are critical to the future of healthier patients and high-performing organizations (U.S. Department of Health and Human Services, 2018). Although quality care and patient safety are the primary goals of nursing practice, factors beyond the RN's control may impact the ultimate outcome for the patient. The identification and definition of clinical outcomes must focus on the telehealth encounter itself and include examination of the patient's engagement and ability to carry out the collaboratively developed plan of care.

Development of Nurse-Sensitive Indicators.

AAACN has been invested in leading the way toward identification and development of ambulatory care nurse-sensitive indicators (NSIs). In 2013, AAACN commissioned a taskforce to identify and develop NSIs. By 2016 this taskforce proposed 13 indicator areas for further refinement, pilot testing, and eventual benchmarking (Mastal, Matlock, & Start, 2016). This important report was followed by the initiation of a partnership between AAACN and Collaborative Alliance for Nursing Outcomes (CALNOC). CALNOC, one of the original six pilot studies to develop inpatient indicators in the 1990s, was the scientific partner needed to guide AAACN clinical expertise into meaningful measurement for ambulatory settings.

The AAACN/CALNOC team expanded its partnership through continued work on NSI development that include indicators of the vital role nurses assume in telehealth, tele-triage, care coordination, transitions management, and other methods of virtual health care. These activities are crucial for access to care, reduction of acute care utilization, and promotion of health. Health care systems will benefit from NSI measurement that captures the important contributions of telehealth nursing.

Future Trends

As telehealth continues to expand and break down geographical barriers to care, improving efficiencies and access, identification of measures of care will be established. The U.S. Department of Health and Human Services called upon the National Quality Forum (2017) to convene a multi-stakeholder telehealth committee to recommend various indicators to measure use of telehealth as a means of providing care.

To maintain focus on patient care, provider organizations and telehealth RNs need to partner with and thus influence the diverse regulatory and accrediting agencies that set measurement standards for quality care. Quality, risk, and legal aspects are closely connected and continue to be a growing concern in telehealth nursing.

Undergraduate and Continuing Education

The basic skill set of telehealth nursing is not commonly addressed in undergraduate education. Many graduate nurses obtain basic education on telehealth nursing during their initial clinical orientation or nurse residency program (AAACN, 2017a, 2017b). However, am-

bulatory care and telehealth nursing standards are influencing many undergraduate clinical assignments within the curricula of baccalaureate-level nursing programs.

Telehealth nurses, just as all nurses, deal with continual changes in technology. This growth in technology and further development of telehealth nursing leads to the need for continuing education for the telehealth nurse. Currently, each agency and/or organization creates its own orientation and education program. Each nurse has an obligation to continuously maintain and update knowledge and competency as a lifelong learner (ANA, 2015a, 2015b). The telehealth nurse must regularly evaluate the impact of new knowledge and change on the scope of telehealth nursing practice, keeping in mind ethical and legal implications for the patient, nurse, and organization.

Summary

Over the past decade, health care has expanded its boundaries, a result of changing legislation, evolving reimbursement practices, and new technology. This new technology has improved the diagnosis and treatment of illness and disease, enlarged the practice of health care delivery, especially the practice of telehealth nursing, as well as developed new communication modalities among interprofessional providers, patients, caregivers, and resources across the health care continuum.

Related most importantly to telehealth nursing, the changes have expanded the definition of telehealth nursing and its defining characteristics, integrated new factors within the concept of the external environment in the conceptual framework, and developed new nursing roles in care coordination and transition management.

This document also explores the evolution and history of telehealth nursing, identifies current types of telehealth care organizations, and examines issues emanating from changes in the landscape of health care that affect nurses and other professionals in the telehealth environment. Discussion of gaps in education for telehealth practice are identified and recommendations made to close the gaps, so nurses are prepared to work to the top of their license. Finally, recommendations are offered for telehealth professionals to partner with government and regulatory agencies to set measurement standards for quality care, risk avoidance, and adherence to legal requirements. The standards that follow provide the details of the practice of nursing in the telehealth environment.

Standards of Practice for Professional Telehealth Nursing

The American Academy of Ambulatory Care Nursing (AAACN), as the specialty nursing organization for nurses practicing in ambulatory care, is responsible for establishing and publishing the standards for telehealth nursing practice. These standards are authoritative statements that describe the responsibilities for which telehealth nurses are accountable. In this version, the standards have been separated into two domains: *Clinical Practice* and *Professional Performance*.

Standards of Professional Clinical Practice

The six Clinical Practice Standards address the science and art of nursing clinical practice in ambulatory care – the nursing process. The nursing process is a rational, systematic method of planning and providing nursing care. It was developed by Ida J. Orlando in the late 1950s as she observed nurses as they practiced.

It has been refined by the profession over the intervening decades and now has six steps, applicable to both individuals and populations that are the basis of the standards of clinical practice in nursing (ANA, 2012).

- **Assessment:** The professional nurse's systematic, dynamic collection and analysis of the patient, group, and/or the population with the presenting concern, using physiological, psycho-socio-cultural, spiritual, economic, and lifestyle data as well as the patient's response to the problem.
- **Nursing Diagnosis:** Professional nursing statement that represents the nurse's clinical judgment about the patient's response to actual or potential health conditions or needs.
- **Identification of Expected Outcomes/Goals:** Professional nurse identifies, using input from the patient/family, other health professionals, and current scientific evidence, expected outcomes of an individualized plan of therapies and/or treatment(s).
- **Planning:** Professional nurse outlines a set of written statements that set measurable and achievable short and long-term goals to meet expected outcomes.
- **Implementation:** Professional nurse provides nursing care services to meet patient's needs and goals and documents all activities. Implementation involves a variety of roles:
 - Care Coordination/Transition Management
 - Health Teaching and Health Promotion
 - Consultation

- **Evaluation:** Professional nurse's continual appraisal of patient's status and effectiveness of care received, revising the care plan and interventions as appropriate.

Standards of Nursing Organizational and Professional Performance

The ten professional performance standards for telehealth nursing identify a competent level of behavior in the organizational and professional dimensions of each telehealth nurse's specific role. These behaviors include activities related to:

- Ethics
- Professional Development
- Research and Evidence-Based Practice
- Performance Improvement
- Communication
- Leadership
- Collaboration
- Professional Practice Evaluation
- Resource Utilization
- Environment