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## Nurse Practitioners' Perceptions of Telehealth Behaviors

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## ABSTRACT

### NURSE PRACTITIONERS' PERCEPTIONS OF TELEHEALTH BEHAVIORS

**Problem:** NP's must be proficient in the behaviors that are required for a successful patient encounter to provide the full benefit of nurse practitioner (NP) telehealth. Consequently, it is imperative for NPs to understand telehealth etiquette behaviors which include the technical and non-technical skills that are necessary for an effective NP-patient telehealth encounter (Haney, Kott & Fowler, 2015). Telehealth has been incorporated into healthcare delivery and its use is expanding. In the United States, it is predicted to be used by seven million patients in 2020 (US Department of Health and Human Services, 2018). Appropriate access to health care is a necessity for the advancement of good health. Some common healthcare impediments are lack of available appointments, clinician shortages, inadequate transportation, and rural geographic challenges. Studies in the literature support the benefit of telehealth for reducing issues of inaccessible healthcare. NP telehealth is proven to improve the health care gap that exists when there is reduced health care access. Yet there is limited telehealth behavior education in the NP curriculum (Henry, Ames, & Vozenilek, 2018). A goal of this descriptive research on the NP perceptions of telehealth etiquette was to explore the research topic of nurse practitioners' perceptions on telehealth etiquette and actual telehealth etiquette behaviors.

**Methods:** This is a qualitative, descriptive study to explore perceptions of NPs on telehealth and the phenomenon of telehealth behaviors. Qualitative data on nine nurse practitioner's perception of telehealth was collected during individual semi-structured interviews. The 10-question interview spanned approximately 30 minutes and was recorded on zoom web-based software. The recordings from the video-audio interviews were transcribed and thematic analysis used to reach data saturation. Data was categorized using content analysis of themes.

**Results:** All of the study's NP interview responses were in accord with the theme that telehealth behaviors are unique and are necessary for an effective patient encounter. Responses generated themes to represent etiquette behaviors as a professional skill to be included into nursing education and professional competencies. Themes: 1) Telehealth etiquette specific knowledge base, 2) Telehealth etiquette NP skill competencies, 3) Identification of etiquette behaviors for successful implementation, 4) Evaluation illuminate's voids where education is needed, 5) Physical assessment can be difficult without touch.

**Discussion:** Data from the study was categorized into five major themes. The themes that developed from the interview corroborated the assertion that telehealth requires specific training to master specific behavior skills in addition to the technical required learning elements. The response data indicated the NPs perception that telehealth practitioners need telehealth training to learn both the technical and human behaviors that are required for telehealth delivery. Applicable NP educational training on telehealth would benefit patients and the nursing profession. Improvements that contribute to the progress of telehealth are also improvements for patient health care access.

Michelle Austin  
May 2020



NURSE PRACTITIONERS' PERCEPTIONS OF TELEHEALTH  
BEHAVIORS

by  
Michelle Austin

A project  
submitted in partial  
fulfillment of the requirements for the degree of  
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APPROVED

For the California State University, Northern Consortium

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## CHAPTER 1: INTRODUCTION

Telehealth is predicted to be used by seven million patients in 2020 (US Department of Health and Human Services, 2018). The purpose of this descriptive qualitative study is to evaluate nurse practitioners' (NP's) perception of telehealth and telehealth etiquette professional behaviors. Telehealth etiquette behaviors are NP professional behaviors that are essential elements in a successful NP-patient encounter. Telehealth etiquette behaviors include the deliberate implementation of NP professional behaviors such as: communication, empathy, appearance, body language (both the actual conveyance and the observation of body language and non-verbal cues). The NP should use specific behavior of both nonverbal and traditional communication for an effective telehealth encounter. These behaviors are not new NP professional behaviors but are enhanced in the telehealth visit due to the relevancy of the behaviors, known as telehealth etiquette (Gustin, Kott, & Rutledge, 2019). The omission or minimizing of telehealth etiquette behaviors can negatively affect the telehealth NP-patient encounter. The NP establishes the environment for an effective telehealth encounter by using telehealth etiquette skills.

### **Telehealth Behaviors**

The telehealth nurse practitioner-patient interaction differs from the in-person, face to face interaction. The telehealth NP- patient encounter is void of the traditional communication aides that are in the in-person visit such as touch and subtle facial expressions. The delivery of telehealth patient care requires the NP to use prevailing NP professional behaviors, in addition to specific telehealth professional behaviors, known as telehealth etiquette (Haney, Kott & Fowler, 2015). Professional behavior implemented by a NP during a practitioner-patient interaction, consist of a varied set of components (Rutledge et al., 2017). These components include knowledge, communication, technical skills, reflection and values. Telecare etiquette is a specific set of skills inclusive of both

technical and human factors for providing effective telehealth delivery. Both verbal and non-verbal communication are factors in telehealth etiquette. Since comprised of both verbal and non-verbal communication, telehealth etiquette requires the command of emotional intelligence (Haney, Kott & Fowler, 2015). Technological components include, connectivity, lighting, and equipment. Human factors in telehealth etiquette include virtually projecting empathy, and respect. To substitute for the lack of in-person touch, empathy can be conveyed through body language of leaning in and eye contact. Telehealth etiquette behaviors includes the appearance of the presenter which encompasses additional professional components in telehealth etiquette including clothing color, and style. Telehealth etiquette attire best practice is the NP wearing attire that would be worn during an in-person visit but averting potential eye strain by avoiding visually distracting patterns. Clearing the visual environment of clutter is an effective telehealth etiquette intervention. Distractors include noise, nonfunctioning equipment, fidgeting behavior and improper lighting. Prior to initiating the telehealth encounter, the patient must be ensured that the environment is private and all present personnel should be introduced (Haney, Kott & Fowler, 2015). This research explored the nurse practitioner's perception of telehealth etiquette behaviors in a telehealth, nurse practitioner encounter.

NP etiquette behaviors in telehealth delivery are an example of telepresence. The technical configuration is just as important as the providers appearance, as all merge into behaviors involved in telehealth for the goals of an effective patient encounter. NPs that are equipped with proper telehealth etiquette training will be better prepared to provide excellent telehealth patient delivery. A requirement for competent NP professional behavior is the NP's knowledge and ability to recognize the behavior. Identification of the NP's perceptions about telehealth etiquette behaviors will benefit telehealth delivery advancements and establish the need for telehealth etiquette in-service training and

inclusion in the NP educational curriculum (Henry, Ames, & Vozenilek, 2018). NPs must be proficient in telehealth etiquette nuances that are required for a successful encounter. The NP's use of telehealth etiquette ensures the full benefit of NP telehealth (Haney, Kott & Fowler, 2015).

### **Access**

Telehealth contributes to the mandate of Healthy People 2020 prescribing that all people should be able to conveniently obtain health services for emergency care, primary care and mental health (Healthypeople.gov2020). NP telehealth patient interactions require the NP's use of professional behaviors; additional unique behaviors are required in the telehealth patient encounter. The rural and vulnerable (RV) population encounter similar health access problems as does the general population, but the rural and vulnerable population encounter additional challenges. The list of challenges faced by the rural and vulnerable population include: Transportation, inadequate amount of medical facilities and providers, higher levels of chronic diseases, low health literacy, and stigmas related to health care. The low-density composition in rural populations is a cyclical problem leading to hospital closures affected by limited tax revenues from the small number of residents. Rural communities are also prone to a disproportionately large volume of geriatric residents that are prone to have mobility issues affecting the forced option of aging in place. The RV populations' transportation issues are amplified by decreased finances and civic resources (Bhatt & Bathija2018). 40% of U.S rural roads are unsafe for travel. Incongruous to a smaller percentage of the U.S. population, 45% of U.S. highway fatalities occurred in rural areas (U.S.\_Department of Transportation, 2020).

### **Telehealth During a Pandemic**

The COVID-19 pandemic created an immediate need for expanded healthcare delivery. To accommodate the current unprecedented public health demands, pertinent federal privacy regulations have been modified to allow greater access to healthcare under the 1135 waiver authority and the Coronavirus Preparedness and Response Supplemental Appropriations Act (Medicaid.gov, 2020). Additionally, the Health and Human Services, Office for Civil Rights and the Centers for Medicare & Medicaid Services has broadened financial coverage for a greater inclusion of telehealth services in response to the COVID-19 healthcare crisis. (Robeznieks, 2020). COVID-19 easement of restrictions specific to telehealth services have eliminated the Medicare rural site limitations. Now telehealth delivery is approved for any Medicare patient at any location which allows the home to be the approved healthcare site. Medicare has broadened the eligible provider list that includes the NP as an eligible provider (The Center for Connected Health Policy, 2020). Telehealth's expansion was increasing prior to the COVID-19 pandemic and is expected to continue to expand healthcare delivery after the crisis (Dyrda,2017).

### **Benefits of Telehealth**

A digital healthcare system such as telehealth can diminish barriers to healthcare. Telehealth improves access to healthcare for the RV population through virtual care modalities, diminishing travel needs and expanding healthcare service options. Telehealth is a viable tool for RV access issues and has the added ability to provide virtual care including primary care with the additional capacity for broadening the range of services such as ophthalmology, radiology, cardiology, mental health and specialty services such as E-consults. Rural communities generate a decreased anonymity for its inhabitants. A lack of privacy can proliferate the stigma associated with health issues as with mental health in the rural community. Telehealth could provide a screen of anonymity in

addition to increasing access to care (Healthcare Access in Rural Communities, 2019). Another benefit of telehealth to the RV community is financial. Healthcare costs are reduced when telecare delivery is implemented. Cost savings are evidenced through reduced use of emergency patient visits and hospital admissions (Bhatt & Bathija, 2018). A large study involving rural communities demonstrated a yearly financial impact of \$522,000 with telehealth implementation (Brooks, Lara, Whitacre, & Brian, 2011). Increased telehealth etiquette knowledge can result in telehealth progress leading to improved healthcare access for the vulnerable and rural population. A goal of this descriptive research on the NP perceptions of telehealth etiquette was to explore the research topic of nurse practitioners' perceptions on telehealth etiquette and actual telehealth etiquette behaviors.

### **Problem**

Rural and vulnerable populations lacking in civic resources, are especially impacted by healthcare barriers (American Hospital Association, 2019). Remote telehealth delivery minimizes barriers for obtaining medical care. This increased health care access is significant to the rural and vulnerable population whose problems with health care access are exemplified due to limited resources (Bhatt & Bathija, 2018). Combining the expertise of NPs with the use of telehealth can contribute to the eradication of health care inaccessibility. Telehealth lessens access impediments such as transportation difficulties, lack of providers in rural areas, and reduced resource options for the vulnerable population. Telehealth expands health care accessibility for patients by decreasing travel difficulties and problems specific to patients residing in rural locations. Telehealth, delivered by nurse practitioners can remove obstacles and increase health access by implementing digital health care modalities such as video interactions, remote appointments, and home monitoring (American Hospital Association, 2019). Healthcare

disparity in the rural and vulnerable population that have been a focus of this paper is shown in current data to have been a factor in the COVID-19 pandemic. African Americans with COVID-19 were more frequently hospitalized and dying at higher rates than the general population (Centers for Disease Control and Prevention, 2020). The disparity in health outcomes that are evidenced in the COVID-19 pandemic are not a new phenomenon as addressed in this paper. The American Association of Nurse Practitioners (AANP) professionally advocates for patients and communities that are exposed to detrimental health difficulties and barriers related to one's socio-economic status and the underrepresented populations. The AANP has issued an official policy mandate in response to COVID-19 research data that illuminated the disparity in health outcomes of the minority and underrepresented populations. The edict implored federal and state entities to enact policies that reduce current healthcare inequities:

- Eliminate barriers in America's Health Professional Shortage Areas by state removing regulatory barriers thus increasing NPs ability deliver healthcare in all 50 states.
- Allow medical service payment approval for all medically necessary services, such as nutrition and mental health.
- Create a committee to address the continuation of healthcare disparity in America. (AANP, 2020).

There are multiple benefits with telehealth delivery to the RV population including 24-hour provider access, and options for treatments from specialists or clinicians that would be out of the geographical domain without the use of telehealth. Proper telehealth etiquette behaviors in the virtual visit are important for effective delivery in telehealth. The NP's use of telehealth etiquette ensures the full benefit of NP telehealth. Human factors of telehealth etiquette are essential to healthcare access because their inclusion ensures a successful telehealth patient encounter delivery. (Haney, Kott &

Fowler, 2015). Increased telehealth etiquette knowledge can result in greater telehealth patient delivery leading to improved healthcare access for the vulnerable and rural population (Haney, Kott & Fowler, 2015). Disparities exist in health outcomes in the rural population. Research data demonstrated that rural communities obtained inferior quality medical services and a lower health outcome than metropolitan community residents. Telehealth can ease healthcare burdens of the RV through diminishing issues with access including medical costs, decreased provider availability and transportation (National Healthcare Quality and Disparities Report chartbook, 2017). Telehealth can intervene as a tool to decrease healthcare inaccessibility and equitably align healthcare (Bhatt & Bathija, 2018).

Nursing, as a profession is a dynamic evolving process. Telehealth is also an evolving process in the delivery of healthcare. Impediments to healthcare access such as a lack of transportation are diminished with the use of telehealth. The improvements in health care accessibility with telehealth delivery are supported by studies in the literature. Examples of telehealth's influence is seen in the instance of patients with access obstacles, facilitating specialty care for patients in rural hospitals, and reducing healthcare costs. The patient's positive perception of NP telehealth encounters is also supported in the literature (Bhatt & Bathija, 2018), (Henderson, Davis, Smith, & King, 2014). It is imperative for the NP to have both technical and non-technical telehealth skills, to deliver an effective NP-patient encounter (Barbosa & Paes da Silva, 2017). This descriptive, qualitative study explored the nurse practitioner's perceptions and ability to identify telehealth etiquette behaviors.

### **Purpose and Background**

The purpose of this descriptive study is to evaluate nurse practitioners' perception of telehealth and telehealth etiquette professional behaviors. Enhancing the expertise of

NP's in the delivery of telehealth will contribute to the eradication of healthcare inaccessibility. This research data may be useful for improving NP telehealth and delineating the need for telehealth etiquette in the NP educational curriculum (Rutledge et al., 2017). A continued trend in the U.S. population illustrated an upsurge of rural communities with decreasing populations, indicating a continuation of the challenges embedded in the RV communities (Johnson & Lichter, 2019). A primary determinant of medical management is health care accessibility. Integrating the proficient NP with telehealth will help reduce healthcare inaccessibility. Telehealth delivers both direct and indirect improvements, such as, medical expense savings, healthcare access, patient satisfaction and enhanced patient outcomes. Appropriate access to health care is a necessity for the advancement of good health. Some common healthcare impediments are, lack of available appointments, clinician shortages, inadequate transportation, and rural geographical challenges.

Telehealth expands health care accessibility for patients by decreasing travel difficulties and problems specific to patients residing in rural locations. Telehealth delivered by NPs broadens tangible health access for the RV population. Body language is an integral part of a NP-patient encounter. In a telehealth interaction, visualization of the clinician can be limited, reduced by the scope of the visual projection. Therefore, the communication and presentation factors of tone, facial expression, and choice of words, are imperative components in a NP-patient telehealth encounter (Haney, Kott & Fowler, 2015). Correct encounter behaviors are important for effective telehealth delivery and etiquette behaviors are essential. A NP's perception of the professional behaviors in telehealth etiquette is a demonstration of knowledge that indicates the ability to also perform the appropriate behavior (Haney, Kott & Fowler, 2015). Data that demonstrates the efficacy of evidenced-based practices, contributes to intervention and implementation

that can narrow the disparity in the treatment gap, for rural Americans which can save lives (Henderson, Davis, Smith, & King, 2014).

### **Theoretical Framework**

The nursing process discipline theory, first presented in 1961, is a model constructed by Ida Jean Orlando from her own research (Orlando, 1963), (Petiprin, 2016). The main foundation of the theory, which is also called the deliberative nursing process theory, depicts an opinion that nursing's goal is to decipher and meet the patient's immediate requirements (Orlando, 1963). A central concept in this theory, the function of professional nursing, epitomizes the NP's role in the delivery of telehealth. Incorporating the nursing process to manage the patient's immediate reaction is also a foundational component of the deliberative nursing process theory. The dimension modeled in Orlando's theory illustrating that a patient's outward display, may not be the actual cause of the symptom, is a dimension that is applicable to the telehealth NP-patient encounter. Accordingly, an assumption in Orlando's theory is that nursing's core function to use perception to discern the patient's needs. This theory provides a framework to fulfill the patients immediate need during the telehealth encounter. A nursing goal of working together with the patient to determine the patient's needs is both a nursing goal and a communication method. Cooperative communication method used by NPs during the telehealth NP-patient encounter, is also the communication model assumption in the deliberative nursing theory. Orlando's theory is an applicable tool to improve and organize NP behaviors (Orlando, 1963).

The main dimension in the deliberative nursing theory is identifying patients' needs through assessment of both the patient's verbal and non-verbal behaviors. The theory's foundation can be integrated into telehealth delivery, as the use of etiquette behavior including verbal and nonverbal communication are necessary components for

effective telehealth delivery. Orlando posited her theoretical foundation on her research conclusions; ascertaining that meeting the primary patient needs is the essential purpose of the nursing profession (Faust, 2002), (Orlando, 1963). Orlando's observational research culminated in a theory specifically for the purpose of interacting amongst the nurse and patient, integrating the nurse's perception and validation to enhance patient outcomes. The development of Orlando's theory establishes conditions for patients to be addressed specifically, encouraging patient input (Petiprin, 2016).

### **Significance of the Study**

Telehealth, predicted to be used by seven million patients in 2020, (US Department of Health and Human Services, 2018) is an expanding medical technology, delivered by nurse practitioners that can remove obstacles and increase health access by implementing health care modalities such as video interactions, remote appointments, and home monitoring (American Hospital Association, 2019). Elements that contribute to the progress of telehealth are also improvements for patient health care access. The ability to identify professional behavior is positively associated with the knowledge and capability to apply the behavior (Bashir & Bastola, 2018). Identification of the NP's perceptions about telehealth behaviors will benefit telehealth delivery advancements, illuminating the need for telehealth etiquette in-service training and inclusion in the NP educational curriculum (Henry et al, 2018). The NP's use of telehealth etiquette ensures the full patient benefit of NP telehealth (Haney, Kott & Fowler, 2015).

## CHAPTER 2: LITERATURE REVIEW

### **Gap in the Literature**

There is a gap in the literature pertaining to nurse practitioner (NP) telehealth behaviors. There are research articles with data that supports the benefits of telehealth for improved patient outcomes, increasing patient's access to healthcare and articles that indicate patient satisfaction with telehealth. To provide effective telehealth care, NP's will incorporate the nuances in behavior that are specific for telehealth. The delivery of telehealth patient care requires the NP to use prevailing NP professional behaviors in addition to specific telehealth etiquette behaviors, yet there is a dearth of studies in the literature on these behaviors and nursing telehealth delivery. An effective telehealth encounter requires that the NP incorporate specific telehealth behaviors applicable to the clinical situation. (Haney, Kott & Fowler, 2015). Further research that contributes to professional behaviors for successful telehealth delivery such as the identification of the NP's knowledge about telehealth behaviors, will benefit telehealth delivery advancements, and illuminate specific educational content needs for telehealth etiquette in-service training and telehealth etiquette inclusion in the NP educational curriculum (Henry et al, 2018). Research on NP telehealth behaviors can contribute to finding the best practices for NP's to deliver optimal telehealth, contributing to eliminating inaccessibility in healthcare.

Henry, Ames, Block, Vozenlinek (2018) completed a systematic literature review and qualitative interview study. The purpose was to identify experienced nurse practitioners' and educators' thoughts on interpersonal telehealth skills. In addition to the systemic reviews of the 9 studies, data was obtained from semi-structured interviews with participants who met the inclusion criteria of having a minimum of three years of telehealth experience. There was a total of six participants from several regional

telehealth centers. Thematic analysis was used for data analysis of the transcribed audio/video recorded interviews. Interview data was categorized into six themes construed from the systematic review data. Results from the systematic literature review indicated a gap in the literature on telehealth human factor behaviors. Participants identified clinician buy-in and technological proficiency as essential for effective telehealth delivery.

A qualitative study of home health professional's perceptions of telehealth completed by Guise and Wiig (2017), explored the perceptions of healthcare professionals on telehealth training. The author aims to explore the lack of data in the literature and, identify specific training needs for telehealth delivery. One of the study's research question is: How is telecare training and the need for telecare training perceived by healthcare professionals in the home healthcare services? The sample size consisted of a cross section of 26 telehealth home health professionals who worked at four different home healthcare agencies. Data was obtained from six focus group interviews with the 26 participants and was collected over a span of five months from the 90-minute semi-structured focus group interviews. Participants included 11 nurses along with other health from 4 different home health services. A systematic text condensation was used for data analysis of the transcribed focus group interviews. The common theme abstracted from the interview corroborates the assertion that telehealth requires specific training to master specific behavior skills in addition to the technical required learning elements. The study data indicates the perceptions from healthcare professionals is that telehealth practitioners need telehealth training to learn both the technical as well as human behaviors that are required for telehealth delivery. Data from the study was categorized into five major themes based on study results. Training matter should specific to the unique requirements in telehealth delivery is the theme that is most relevant to perceptions of nurse practitioners on health care delivery. The study's results align with the premise that

telecare delivery entails the need to integrate the specific skill set of telecare with traditional professional roles.

Tuxbury (2013) conducted a descriptive qualitative study exploring nurse's perceptions of telehealth during interactions with patients. Data from the six nurses semi-structured interview were evaluated to amass knowledge about how a nurse experiences presence during a telehealth interaction with a patient. The study participants were experienced nurses with a minimum of one-year telehealth experience. Data collected from the semi-structured interviews were transcribed and coded using ethnography software. Data analysis involved deduction and categorizing the participants responses. Study results abstracted from the nurses' interview contained two occurrences of presence that were abstracted from the interview responses. presence was defined as a mutual exchange of opened ended discourse. Study results are significant as data indicates the ability for presence to occur during a non-video telephonic health assessment. The study is an example of the importance of the further exploration on a variety of telehealth delivery modes to meet the diverse needs of patients as telehealth continues to expand.

Polinsnski et al (2016) conducted a cross sectional design study on patient's preference and satisfaction with the telehealth delivered care at CVS health clinic. The study's aim was to assess quality improvement and patient satisfaction. The factors that the study focused on were patient's satisfaction with, the telehealth nurse's behaviors and the physical and external quality required for telehealth delivery such as sound, lighting, and transmission quality. The sample inclusion criteria were patients that attended a health session at the CVS minute health clinic. The survey instrument was used to obtain the study data. After attending the medical appointment with the nurse practitioner, participants were given a 12-page survey with questions pertaining to their experience with the practitioner. Survey data results from 1744 patient participants showed that 94

percent of the participants affirmed being very satisfied with the telehealth encounter. The results showed that patients expressed a greater satisfaction with a telehealth visit than with the traditional in-person visit.

Gustin, Kott, & Rutledge, (2019). conducted a -group research design with a pre-test and post-test to evaluate the effectiveness of a telehealth etiquette training program for a graduate nursing curriculum. The study's research question was: Will a two-week in-service improve students' knowledge base on telehealth etiquette? Students' knowledge about telehealth etiquette and the human elements requirements for an effective telehealth encounter was tested two weeks before the program and at the end of the program. In addition, to the pre-test and post-test standardized multiple choice questions, a series of open-ended questions were presented at the end of the program to obtain the impact to the telehealth etiquette class. Participants consisted of 100 university graduate and undergraduate students. Data collected from student knowledge of the telehealth etiquette was evaluated with a survey tool of 11 questions on telehealth etiquette knowledge. Data from the pre-test and post-test indicated the ability of students to gain telehealth etiquette knowledge in a brief time period. The pre-test and post-test telehealth etiquette results corroborate previous studies results that the unique elements involved with telehealth etiquette are not intuitive and specific instructions are necessary.

### **Application to Healthcare Access**

A primary determinant of medical management is healthcare accessibility. Appropriate access to health care is a necessity for the advancement of good health. Some common healthcare impediments are lack of available appointments, clinician shortages, inadequate transportation, and rural geographic challenges. Studies in the literature support the benefits of telehealth for reducing issues of inaccessible healthcare. Telehealth expands health care accessibility for patients by decreasing travel difficulties

and problems specific to patients residing in rural locations. Telehealth, delivered by nurse practitioners can remove obstacles and increase health access by implementing digital health care modalities such as video interactions, remote appointments, and home monitoring (American Hospital Association, 2019). Increased telehealth etiquette knowledge can result in telehealth progress leading to improved healthcare access for the vulnerable and rural population. NP's must be proficient in telehealth etiquette nuances that are required for a successful encounter. The NP's use of telehealth etiquette ensures the full benefit of NP telehealth (Haney, Kott & Fowler, 2015). The article by Bhatt & Bathija, (2018), presents evidence that there is a crucial need for effective telehealth delivery related to the healthcare demand from rural residents and the vulnerable population, defined in the article as populations with severely limited resources. Identification of the NP's perceptions about telehealth behaviors will benefit telehealth delivery advancements, illuminating the need for telehealth etiquette in-service training and telehealth etiquette inclusion in the NP educational curriculum (Henry et al, 2018). Combining the expertise of NP with the use of telehealth will contribute to the eradication of health care inaccessibility. This data may be useful in improving NP telehealth and delineating the need for telehealth etiquette in the NP educational curriculum (Bhatt & Bathija, 2018).

## CHAPTER 3: METHODOLOGY

The delivery of telehealth patient care requires the NP to use prevailing NP professional behaviors in addition to specific telehealth professional behaviors known as telehealth etiquette. Telehealth etiquette is comprised of verbal and non-verbal communication, equipment management, and the display of emotional intelligence (Haney, Kott & Fowler, 2015). For the purpose of providing the full benefit of NP telehealth, NP's must be proficient in the nuances that are required for a successful encounter. Consequently, it is imperative for NPs to have both technical and non-technical skills that are necessary for an effective NP-patient telehealth encounter (Haney, Kott & Fowler, 2015).

### **Project Design/Data Collection**

This is a qualitative, descriptive study to explore perceptions of NP on telehealth and the phenomenon of telehealth behaviors. Data on the nurse practitioner's perception of telehealth was collected during individual semi-structured interviews. This interview process consisted of the use of web-based zoom software. Interviews spanned approximately 30 minutes with free-flowing dialogue of 10 questions recorded on the zoom web-based software. Participant demographics collected were age, gender, years of nursing experience, and nursing specialty. The recordings from the video-audio interviews were transcribed and thematic analysis used to reach data saturation. Data was categorized using content analysis of themes. Questions were designed specifically for a qualitative study, to promote dialogue. After obtaining the author Henry's (2018) permission, the validated instrument from the study, "practitioners views on interpersonal skills in telehealth delivery" was used for the interview questionnaire in this study. Three additional open-ended questions were added to probe discussion on etiquette behaviors

developed through input from content expert Dr. Dorothy Moore (D. Moore, personal communication March 21, 2020). The interview questions used in the study pertained to the NP's perception of telehealth delivery and telehealth etiquette behaviors. Study inclusion: licensed nurse practitioner, minimum age 18, minimum telehealth experience 1 year, exclusion: less than 1 year of telehealth work experience. Study data was collected by video/audio recorded interviews using web-based zoom software. Content analysis and deduction was used to categorize the identified themes from the coded transcription data (Henry, Ames, Block, & Vozenilek, 2018).

### **Sample**

The subjects were obtained from colleagues that are NPs using the snowball sampling method. Nine nurse practitioners were interviewed for this study. Recruitment procedures ensured voluntary participation. Telehealth etiquette is a skill set of professional behaviors specific to a telehealth encounter to enable a successful patient interaction. Correct encounter behaviors are important for effective telehealth delivery and etiquette behaviors are essential. The NP's perception of the professional behaviors in telehealth etiquette is a demonstration of knowledge that indicates the ability to also perform the appropriate behavior (Haney, Kott & Fowler, 2015). There is little evidence on the NP's perception of professional behavior in telehealth. There is no data in the literature on the NP'S perceptions of telehealth etiquette behaviors (Bornstein, Jager, & Putnick, 2013).

### **Protection of Human Subjects**

Precautions to Minimize Risks were implemented for the protection of subject confidentiality and to avoid data breach. Professional security standards were adhered to. Study data including web-based zoom interview audio-video recordings, transcriptions, demographic data and signed consents were stored electronically on password protected

google drive. To prevent data breach, access is was limited to the researcher and PI. Paper documents were contained in a confidential folder inside a locked cabinet with access available only to the researcher. Shared, study data was presented in aggregate form with no participant identifying information. Patient personal information obtained for the study will be deleted from the computer after one year. All research information will be managed adhering to standards that protect confidentiality and prevent data breach. Study subjects were assigned an identification number for analysis in lieu of personal identifying information for privacy and anonymity. This code was stored on the researcher's secured computer. Data was collected and stored electronically on the researcher's secured password protected computer. Only the researcher and PI had access to this data. All research information was managed adhering to standards that protect confidentiality and prevent data breach.

Study interview technique involved participant questioning from the prepared questionnaire for a probing dialogue on telehealth behaviors. The planned dialogue was developed to investigate a trend in the literature on nursing professional behaviors that correlate with nursing practice in the delivery of telehealth. See the appendix A for the interview instrument. Interview details were coordinated through email correspondence including consent, instructions and appointment time. Before the start of each interview the instructions and salient details were reviewed with the participant. See page 1 of consent in appendix B for instructions and details. The average time span in the 10-question interview was 30 minutes. With the use of zoom web-based software, interviews were recorded, and then entire content was transcribed for analysis. The transcribed content was coded and categorized based on surfaced themes from similar responses. Deduction of coded content was summarized into Five themes.

## CHAPTER 4: ANALYSIS

This study's exploration of NP's perception on telehealth behaviors identified a diverse set of themes and categories arising from interview responses that correlate with the study's focus. Themes and categories were identified by related codes. Content analysis entails data evaluation and structuring with a coded label. The content analysis technique was used to explore themes generated from the NP interview responses (Bengtsson, 2016). The thematic content analysis design was implemented in this study to generate themes through a methodical set of similar study factors collected from respondent's thoughts and then categorized into codes. Analysis was initiated by searching the transcripts for common groupings and data saturation was used to determine a termination point. Analysis at the beginning stage was conducted by the principal researcher (MA) and involved an exhaustive and thorough reading of the transcriptions while notating and highlighting study factors from the collected thoughts to develop codes for the thematic categories. The next stage was conducted with assistance of a research associate (TP) and involved reducing the notated transcript responses into smaller categories with subheadings. To provide study validity MA and TP deliberated over the transcripts' note, code and category development. Comparisons were discussed, duplicates were eliminated and a final set of categories with corresponding codes emerged from the primary analysis. Thematic saturation was reached with interview number 6 as there were not any new themes generated. To meet analysis rigor, three additional interviews were analyzed. Similar words, phrases and perceptions were categorized together to form the study's themes (Bengtsson, 2016). Data analyzed through content analysis makes objective inferences from the data collection. After methodically classifying content and characteristics, content analysis of the NP interview data produced objective inferences that were categorized and compiled into themes.

Completion of the content analysis process developed five categories procured from similar concepts and identified in the NP interview responses (Bengtsson, 2016).

Research conclusions were determined based on the results developed from the thematic analysis. Figure 1 represents the categories and codes.

Participant demographics collected were age, gender, and years of nursing experience. Demographic results: There were nine NP study participants: seven females, five males, ages ranged from 34-56 years of age. All participants had greater than two years of telehealth experience with an average of nine years of nursing experience. Snowball sampling procured participants from medical facilities in three states: three from Michigan, two from North Carolina and four from California.

### **Thematic Development**

#### **Behaviors**

This qualitative study's exploration focused on the NP perceptions of behaviors known as telehealth etiquette. The premise of the study is that the specific skill set required in telehealth etiquette is necessary for providing effective telehealth delivery. The category of behaviors was represented in the interviews with a frequency of responses related to skills, voice, tone, empathy, eye contact, attire, equipment, and connectivity (Haney, Kott, & Fowler, 2015).

Theme: Telecare etiquette requires a specific set of skills inclusive of both technology and human factors for providing effective telehealth delivery. NP1's comment reflecting specific skills of telehealth etiquette:

“We have to work at using eye contact and tone, something to convey meaning that may not be as obvious as in the face to face visit”. Telehealth is also inclusive of technological behaviors stated in NP1d's response “Part of our communication skill is making sure connectivity is secure.”

## **Communication**

NP's that are equipped with proper telehealth etiquette training will be better prepared to provide excellent telehealth patient delivery. A communication category, an essential telehealth etiquette component was identified based on the thematic categorization of the NP's responses. Similarities in NPs responses included interaction, engage, nonverbal, signs, tone, express, convey (Haney, Kott, & Fowler, 2015). Theme: Effective NP telehealth requires telehealth etiquette knowledge. NP3's response is an example of the importance of communication behaviors in telehealth.

“Nonverbal communication behavior is very important with telehealth. nonverbal communication helps express empathy and caring which leads to trust and compliance with your patients that leads to patient satisfaction.”

## **Alignment**

A relationship between nurse practitioners' perceptions on telehealth etiquette and actual telehealth etiquette behaviors is an explorative element of the study. Examples of responses to the study interview question on telehealth etiquette performed by the NP indicated that the NP's perceptions of telehealth etiquette behaviors are actual telehealth etiquette behaviors. Theme: A requirement attaining competent NP professional behavior is the NP's knowledge and ability to recognize the behavior (Henry, Ames, Block & Vozenilek, 2018).

NP4: “So providing positive feedback, asking the right question, keeping the patients engaged, make them feel that they're being listened to and making them feel that they are appreciated. Provide a friendly environment: being polite, smiling”.

NP5: “Maintaining eye contact. A lot of times we look up towards the little light instead of looking down, towards the patient so that we look engaged. Develop trust or develop rapport by introducing ourselves, you know, explaining how, you

know, the ritual modality works, ensuring, you know, their privacy, making them feel at ease, and of course, you know, conveying that you're knowledgeable and have the skills to do the job”.

### **Plan**

There is continual demand for NP telehealth. NP telehealth is proven to improve the health care gap that exists when there is reduced health care access, yet, there is limited telehealth etiquette preparation included in the NP educational curriculum. (Henry, Ames, Block & Vozenilek, 2018). Although NP education was not a question on the questionnaire, in discussing preparation and organizational support for telehealth delivery, all of the interviewees’ disclosed that they did not receive sufficient telehealth education during their NP education. Concerning specific preparation for a telehealth encounter, the consensus of elements for the encounter preparation based on content analysis were telehealth etiquette behaviors like chart review preparing before the visit with a patient pre-visit introduction, ensuring connectivity and equipment operations. Theme: Identification of the NP’s perceptions about telehealth etiquette will benefit telehealth delivery and reveal the need for telehealth etiquette in-service training and telehealth etiquette inclusion in the NP’s educational curriculum. The following response by NP6 is representative of many of the participants responses:

“It truly comes down to the simple things like where's your webcam, positioned so that the patient can see you well, making sure that the patient can hear you on the other end and that your pictures are clear, making sure there's nothing distracting in the background like you have your blinds closed behind you. If you don't think of those things and the patient can't see you because of the window behind you, they're not even going to be paying attention to what you're trying to talk to them about”.

## Challenge

The consensus from the NP interview data of challenges to telehealth delivery, was related to performing the patient examination, especially the heart and lung assessments without the use of touch. Patients that have difficulties interfacing with digital technology were also a reported telehealth delivery difficulty. Theme: Physical touch assessment is preferred by NP for patient exams.

Table 1

### *Category Codes*

<b><u>Behavior:</u></b>	eye contact,	empathy, voice,	specific, intuitive
<b><u>Communication:</u></b>	engage, hearing	nonverbal, signs	feedback, caring
<b><u>Alignment:</u></b>	listen, express	deliver, dress	technical, team
<b><u>Plan:</u></b>	effective, outcome	review, comfort,	knowledge, trust
<b><u>Difficulties:</u></b>	exam, assess	comprehension	touch

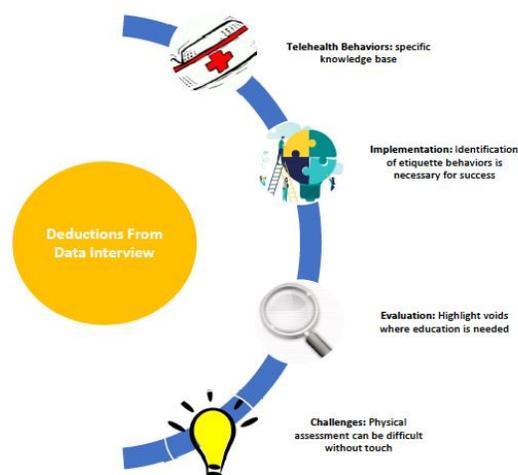


Figure 1. Thematic Summary

## **Results**

The study exploration results identified a consensus among NPs on issues that telehealth behaviors are necessary for an effective telehealth encounter and that these behaviors need to be included in nursing education. Building trust with the patient before the initial encounter was another consensus among the interviewed NPs, and all of the participants expressed the perceived value in the use of non-verbal communication to enhance the virtual visit. Alternatively, there was a consensus that performing the physical exam without the use of touch presented a challenge in telehealth delivery. The literature corroborates the consensus of the response data correlating with the themes: telehealth behaviors are specific and necessary for telehealth, nonverbal communication and building trust are essential for effective telehealth (Gustin, Kott, & Rutledge, 2019).

## **Limitations**

The study limitations include a small sample size. A larger sample could produce stronger conclusions. The recruitment procedure using snowball technique, could allow bias as some participants and researchers can be known by each other, and the relationship could affect respondent accuracy. Self-reported data could be affected by selective memory or bias.

## CHAPTER 5: CONCLUSION

The ability to identify professional behavior is positively associated with the knowledge and capability to apply the behavior (Bashir & Bastola, 2018). Identification of the NP's perceptions about telehealth behaviors will benefit telehealth delivery advancements, illuminating the need for telehealth etiquette in-service training and inclusion in the NP educational curriculum (Henry et al, 2018). The majority of the study's NP's interview responses were in accord with the theme that telehealth behaviors are unique and are necessary for an effective patient encounter. Response generated themes, illuminated that etiquette behaviors are a professional skill that need to be included into nursing education and professional competencies. Prevailing themes generated from participant responses indicated a consensus on the importance of establishing trust before and during a patient interaction.

Increased telehealth etiquette knowledge can result in telehealth progress leading to improved healthcare access for the vulnerable and rural population. Combining the expertise of NPs with the use of telehealth can contribute to the eradication of health care inaccessibility. Data that demonstrates the efficacy of evidenced-based practices, contributes to intervention and implementation that can narrow the disparity in the treatment gap for the RV population. This study data contributes to filling a void in the research gap on NP perceptions of telehealth etiquette behaviors. Additional research that this study's data could contribute to is further research exploring NP educational curriculum and perceptions. A follow-up on my study could be a NP telehealth etiquette, cost effectiveness study, and patient satisfaction with NP telehealth. The ability to identify professional behavior is correlated with knowledge and capability to apply the behavior. Increased telehealth etiquette knowledge can result in telehealth progress leading to improved healthcare access for the vulnerable and rural population.

A telehealth nursing certification is a specific nursing practice recommendation that would enhance the nursing profession and is supported by NPs based on the perception data collected in this interview. The responses from the NPs interviewed in this study indicated a necessity to include telehealth into the nursing curriculum. Therefore, additional specific practice recommendations are to develop telehealth continual education programs, certifications and nursing competencies. Elements that contribute to the progress of telehealth are also improvements for patient health care access. The inclusion of telehealth into the educational requirements of the nursing profession would benefit patient care through increased access from better care delivery.

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## REFERENCES

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## APPENDICES

APPENDIX A: NP INTERVIEW QUESTIONNAIRE

1. Please tell me your occupational title and how long you have been practicing in this field.
2. Reflecting back to your very first telehealth session(s), can you describe how you prepared, either on a personal level or as supported by your organization?
3. Based on your own experiences what parts of telehealth do you find very different from traditional face-to-face care?

I would like to focus on the interactions between you and the recipient.

4. Could you briefly describe some problems that you have encountered while delivering telehealth? I'm most interested with interaction problems between you and a recipient on the other end. Problems with the patient, language or communication barriers, trust, rapport, etc. rather than issues with clinical procedures or technology capabilities.
5. Have you ever taught or explained to someone how to deliver care via telehealth?
6. Telehealth delivery requires unique skills and behaviors of NPs, your thoughts?
7. Could you briefly give examples of telehealth etiquette/professional behaviors?
8. Reflect on the importance of non-verbal communication methods in a telehealth encounter
9. To wrap up our interview, is there anything else we should be thinking about when trying to identify competencies and important skills for telehealth delivery?
10. Do you have any general comments and suggestions about the research study?

**APPENDIX B: CONSENT FORM**

**Title of the Study: Nurse Practitioners' Perceptions of Telehealth Behaviors**

Consent to take part in research

The purpose of this descriptive study is to evaluate nurse practitioners' (NP's) perception of telehealth and telehealth etiquette professional behaviors. Study data may be useful for improving NP telehealth delivery which will contribute to the reduction of healthcare inaccessibility. Study data may also illustrate the need for telehealth etiquette in NP training and educational curriculum.

The procedure for the study will consist of participant participation in one individual semi-structured interview. This interview will transpire with the use of web-based zoom software. Interviews will last approximately 20-30 minutes and consist of 10 questions. The locale is the participant's choice because interviews will be conducted remotely with the use of an internet software similar to skype. This interview will be private. This interview will be recorded with audio on the zoom web-based software. The interview questions that will be used in this study pertain to the NP's perception of telehealth delivery and telehealth etiquette behaviors. The interview will commence with a collection of demographic data. Participant demographics that will be collected are age, gender, years of nursing experience, and specialty, if there is one.

Participant privacy and anonymity will be protected at all times. All study data will be stored on a password protected computer drive. Procedures that will be used to protect

data include: Access to study data will be limited to the research team. Any paper documents will be contained in a confidential folder inside a locked cabinet with access available only to the researcher. If shared, study data will be presented in aggregate form with no participant identifying information. Upon completion of the study patient personal information obtained for the study will be deleted from the computer and paper documents destroyed. Your participation in this study is voluntary. At any time, you may choose to end participation in this study without any consequences, negative effects or ill will. You may be assured that the researcher is available to answer any of your questions. If you have any questions about the study or your rights you may contact the researcher Michelle Austin at (626) 824-8166, [michelleaustin@mail.fresnostate.edu](mailto:michelleaustin@mail.fresnostate.edu)

1 of 2 pgs.

Title of the Study: Perceived Telehealth Behaviors by a Nurse Practitioner

1. I..... voluntarily agree to participate in this research study.
2. I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
3. I have had the purpose and nature of the study explained to me and I have had the opportunity to ask questions about the study.
4. I understand that participation involves a study to explore NP perceptions on telehealth.
5. I understand that I will not benefit directly from participating in this research.
6. I agree to my interview being videoed with audio.
7. I understand that all information I provide for this study will be treated confidentially.
8. I understand that in any report on the results of this research my identity will remain anonymous. This will be done by changing my name and disguising any details of my interview which may reveal my identity or the identity of people I speak about.
9. I understand that signed consent forms and original audio/video recordings will be retained on a secure password protected computer drive that only the research team will have access. All participant data will be deleted after in two years.
10. I understand that a transcript of my interview in which all identifying information has been removed will be retained for two years.
11. I understand that I am free to contact any of the people involved in the research to seek further clarification and information.
12. I understand that the results of this interview will be used for a university research study.
13. I understand that Michelle Austin, RN, a doctoral student at the Northern Consortium at California State University Fresno, is the principal researcher.

Contact information: Michelle Austin RN, MSN B-C. (626) 824-8166.

[michelleaustin@mail.fresnostate.edu](mailto:michelleaustin@mail.fresnostate.edu)

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Printed name of research participant      Date

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Signature of research participant      Date

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Signature of researcher      Date